FABRIQUES DE TABAC REUNIES SA.

RESEARCH AND DEVELOPMENT

MONTHLY REPORT

Strictly Confidential

NOVEMBER 1981

Distribution :

A	Messrs.	H. Maxwell (2)	A	H. Friedrich
		R.W. Murray		H. Gaisch
		J. Gibson		W. Gannon
		G. Karandjoulis		J. Guyot
		P. Stolt		F. Lopes
		H. Böckle		J. Mandiratta
		J.B. Boder		I. Marcovitch
		M. Bourlas		U. Nyffeler
		W. Fink		D. Schulthess
B		H. Brugger	B	P. Francis
		D.R. Gatland		A. Read
		H. Schildwächter		W. Tessendorf
		E. Stoop		W. Tschudin
		D. Zelkowitz		G. Voelkl
		H. Fauville		E. Grossen
C		W.G. Lloyd	C	[redacted]
		F.E. Resnik		W.A. Farone
		H. Wakeham		L. Turano
		R.B. Seligman		L.F. Meyer
		M. Häusermann		
D		W. Grünbaum	E	A. Peier
				R. Suter

00014395B

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

LIST OF SUBJECTS COVERED

I. RESEARCH

1. Special Events
2. Biotechnology
3. Chemical and Analytical Services
4. Special Projects

II. PROCESS DEVELOPMENT

5. Nitrate Reduction
6. Pilot Plant Operations
7. Reconstituted Tobacco
8. Unit Operations
9. Special Projects

III. PRODUCT DEVELOPMENT AND QUALITY ASSURANCE

10. Cigarette Development
11. Product Development Laboratory
12. Material Development
13. Tobacco Studies
14. Flavour Development
15. Material Testing
16. Cigarette and Smoke Analysis
17. Q.A. Analytical Services
18. Special Projects

IV. MISCELLANEOUS

19. Specifications
20. Process Assurance
21. Instrumentation and Process Automation
22. Documentation and Library
23. Patents
24. Legislation

Key to Distribution:

A. Complete Report
B. All except Research Report
C. All except Special Projects Research and those reports which might interfere with patent considerations
D. Subject No 9, 12, 15, 17, 18, 19, 21, 24
E. Subject No 10, 12, 15, 17, 19, 21

0000143959

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

TABLE OF CONTENTS

Subject	Title	Author	Page
2	Savoury	Ghiste-P.	1
3	Laundryman	Piadé-J.-J.	4
	Impregnation/Expansion of Tobacco	Villard-J.-M.	6
	Agricultural Chemicals	Speck-M.	7
	Analytical Investigations	Murray-M. Genoud-Y. Lecoultre-E. Moser-F. Piadé-J.-J.	8
5	Nitrate-Reduction by Controlled Fermentation	Schulthess-D.	13
6	Pilot-Plant Operations	Lüthi-N.	15
10	Cigarette Development 2	Frattolillo-A.	16
	Cigarette Development 3	Nagel-P.	32
	Cigarette Development 4	Toïmil-R.	41
	Cigarette Development 5	Du Bois-J.-H.	43
12	Material Development	Erkohen-E.	47
13	Tobacco Studies	Joseph-L.	50
14	Ingredient and Flavour Development	Fatton-J.-P.	52
16	Cigarette and Smoke Analysis	Senehi-F.	54
17	QA Analytical Services	Widmer-A.	59
19	Specifications	Kopp-A.-M.	66
21	Instrumentation and Process Automation	Thévoz-M.	69

0001143960

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : SAVOURY

PERIOD COVERED : OCTOBER 23 - NOVEMBER 27, 1981

WRITTEN BY : Ghiste-P. (PAG)

The purpose of Project SAVOURY is to prepare flavours which, when pyrolized with sheet or tobacco, give Burley-type flavour characteristics.

YEAST HYDROLYSES

Hydrolyses of different yeasts grown on different culture media (yeast disruption - protein hydrolysis - amino acids), were conducted at reflux for 110 hours in the following conditions :

a) Standard hydrolysis with hydrochloric acid 6N (12 litres).

b) Standard hydrolysis with phosphoric acid 45N (12 litres).

c) Standard hydrolysis with sodium hydroxide 6N (12 litres).

This was done in order to determine the influence of the different culture media on amino acid delivery.

SEMI-INDUSTRIAL SCALING-UP

Concerning our pre-engineering study, two suppliers were asked to propose an installation for the production of our standard toasted flavour.

Our pre-engineering study is based on the scheme in Figure 1.

The main apparatus used to produce the standard toasted flavour is as follows :

1. Reactor, capacity of 100 to 200 l (made of stainless or enamelled steel) with shaker, steam jacket and a $3m^2$-condenser.
2. Two filtration systems based on synthetic material pads placed on PTFE (TEFLON) grids.
3. 50-l reactor with shaker and mixer.

0000143961

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

4. 50-1 glass reservoirs.

5. Glass columns for ion-exchange.

6. 20-1 capacity rotary evaporation system using a vacuum.

7. 50-1 reactor (made of glass) with shaker, steam jacket and condenser.

PAG/jig/DECEMBER 1, 1981

0001439962

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

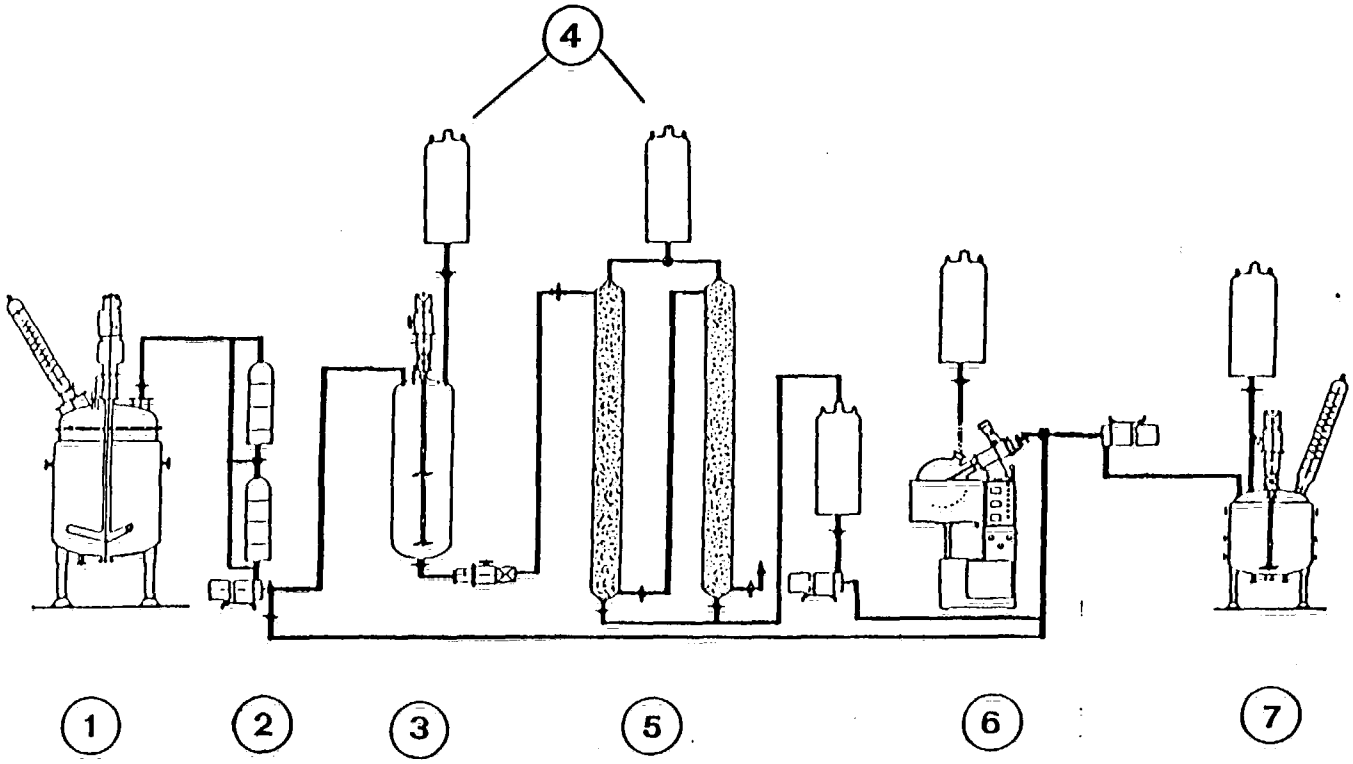


Figure 1 : Main apparatus used to produce the standard cooked flavour

0001439 63

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : LAUNDRYMAN

PERIOD COVERED : OCTOBER 15 - NOVEMBER 15, 1981

WRITTEN BY : PIADE-J.J. (JJP)

Previous reports (1) on CO-reduction in MS and SS smoke by salt casings were reassessed using the most recently modified apparatus.

Preliminary results confirmed that CO-reductions had taken place (Table 1).

In order to improve the sample homogeneity, larger scale sprayings have been initiated using selected salts. 1.5 kg of tobacco were sprayed with a 5% NaCl solution in a rotary applicator. The observed reductions were comparable with those reported in Table 1 and are as follows :

MS per cig. - 17%, MS per g. tob. - 18%, MS per puff - 19%
SS per cig. - 32%, SS per g. tob. - 32%, puff no. + 13%.

REFERENCE

(1) Piadé-J.J., PME Monthly Progress Reports September and October 1981.

JJP/jig/NOVEMBER 30, 1981

2000143964

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

TABLE I : Percent of CO-Reduction as a Function of Salt Addition

	MS			SS		puff count
	Δ % per cig.	Δ % per g.tob	Δ % per puff	Δ % per cig.	Δ % per g.tob.	Δ %
5% Na Cl	-15	-16	-16	-22	-23	+08
5% K Cl	same	-	-	+13	+10	+10
5% NaH CO_3	-03	-07	-03	-15	-19	-3
5% KH CO_3	-10	-12	-10	same	-	-
5% Na_2 CO_3	-22	-23	-24	-37	-38	+10%
5% K_2 CO_3	-12	-13	-11	same	-	-06
5% Na Ascorbate	-08	-12	-08	same	-	same
5% Na_3 Citrate	-18	-19	-18	-31	-32	same
5% K_3 Citrate	same	-	-	-09	-10	same
2% NH_4 Cl	-08	-06	-15	-15	-13	+06

0001143965

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : IMPREGNATION / EXPANSION OF TOBACCO

PERIOD COVERED : OCTOBER 15 - NOVEMBER 15, 1981

WRITTEN BY : Villard-J.M. (JMV)

The possibility of impregnating previously expanded tobacco was investigated.

Some modifications are being made on the vacuum impregnation system in order to solve drainage problems.

The humidity and temperature controls in the conditioning chamber in Cortaillod were modified in order to optimize the stability of these parameters.

JMV/jig/NOVEMBER 30, 1981

00143966

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : AGRICULTURAL CHEMICALS

PERIOD COVERED : SEPTEMBER / OCTOBER 1981

WRITTEN BY : Speck-M.

ROUTINE PESTICIDE ANALYSES

Number of samples analysed for pesticide residues during September/October :

Organochlorines	103
Organophosphorus	103
Methamidophos	4
Dithiocarbamates	101
Maleic Hydrazide	89
Ridomil	65

MS/jig/DECEMBER 11, 1981

00014396?

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : OCTOBER 16 - NOVEMBER 24, 1981

WRITTEN BY : Murray-M. (MUM), Genoud-Y. (YVG)
Lecoultre-E. (ETL), Moser-F. (FMO)
Piadé-J.-J. (JJP)

TROUBLE-SHOOTING

More than 120 headspace analyses were performed upon request by Product Development and QC on 18 tobacco samples, 14 base and top flavours and 8 cigarette samples. Cigarette filler, paper and filters were analysed separately as were the packing materials (FMO).

80 tobacco and filter samples were extracted with methanol and hexane and the extracts were analysed by GC^2 using FID/EC detection (YVG/ETL).

LC profiles were run on a C_{18} column for various flavour samples. Organic acids were analysed by HPLC on groups of tobacco samples as well as on a powder sample from Project LEAR (JJP).

Carboxylic acids were determined on 14 tobacco RL and LTR samples by GC^2 (ETL).

Xylene residues on packing materials and filters were identified by headspace-GC^2/MS. The evolution of CO_2, methanol and ethanol was confirmed by GC^2/MS (ETL) on various tobacco, RL and LTR samples heated for 18 hours at 55°C.

Phthalate residues were identified by MS on samples taken during trouble-shooting visits (ETL).

CF (ETL)

CF values determined in European brands by GC (1) were confirmed by GC/MS. Results of the half-yearly check are given in Tables 1 and 2.

0001443968

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

SERVICE FOR OTHER GROUPS

Routine analyses were performed for Biotechnology on potassium, calcium and magnesium (in 132 samples), phosphate and sulfate (133 samples) and alcohols (20 samples).

DMN/NPY and NNN/NNK /NAtB were analysed in the sidestream smoke of 26 prototype cigarettes submitted by Product Development (project COMPO) (2).

MISCELLANEOUS

The automatic amino acid analyser, Beckman Model 119 CL, was moved to Cortaillod and is presently being installed (JJP).

A 20-port Borgwald smoking machine is being adapted for simultaneous MS and SS measurements of CO and NO with multiple smoking (JJP).

An HPLC method for amino acid quantitation on an NH_2-column with possible simultaneous quantitation of sugars is being worked out (JJP).

REPORTS WRITTEN

Genoud-Y., "Salamander", Technical Report, November 1981.

Lecoultre-E., "Aliphatic Alcohols (C_1-C_6), Acetone and Acetoin in Fermented Tobacco Extracts by Gas Chromatography", Analytical Method, November 1981.

REFERENCES

(1) Lecoultre-E., PME Monthly Progress Report, October 1981.

(2) Memo from Murray-M. to Erkohen-E., November 23, 1981.

WAF/jig/DECEMBER 1, 1981

0000143969

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Table 1

Country	Nb. of Brands analyzed	Nb. of Brands with CF
AU	8	-
BE	11	-
DK	5	4
FR	18	4
GR	6	1
DB	65	2
IT	26	3
NL	9	3
NO	5	5
SW	5	5
CH	26	1
GB	15	1
YU	9	-
TOTAL	208	29

0001439/0

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Table 2 CF IN COMMERCIAL BRANDS

Country	Brand Name	CF (ppm) [1] 1981	CF (ppm) [1] 1980	Manufacturer
BN	Kent 100 S de luxe	(2)	10	BAT
	Carlton 100 S Menthol	(2)	54	American T.
	Winston King Size	(2)	10	Reynolds
DK	New Look Light	31	41	Skandin.T.
	New Look Super	24	44	Skandin.T.
	Prince	10	37	Skandin.T.
	Prince Light	22	32	Skandin.T.
	Savoy Extra Mild	(ND)	35	Skandin.T.
DU	Carlton 100 S	(2)	140	American T.
	Kent 100 S de Luxe	(2)	13	BAT
EG	Kent 100 S de Luxe	(2)	34	BAT
	Kent Golden Lights	(2)	18	BAT
	Cléopatre King Size	(2)	5	Eastern To.
	Cléopatre 100 S	(2)	5	Eastern To.
FR	Camel Filters	36	26	Reynolds
	Camel Mild	33	24	Reynolds
	Royale	5	80	Seita
	Winston King Size	34	27	Reynolds
GB	John Player KS Vanguard	7	10	Imperial T.
IT	Colombo	39	33	Monital It.
	Gallant	5	12	Monital It.
	Winston King Size	21	30	Reynolds
NL	Caballero	16	17	Laurens
	Camel Filters	27	36	Reynolds
	Reynolds No 1	39	44	Reynolds
	Roxy Dual	(ND)	6	Niemeyer
DB	Caballero Filter	11	(2)	Brinkmann
	Caballero Non Filter	23	(2)	Brinkmann

0001439 71

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Table 2 continued

Country	Brand Name	CF (ppm) [1] 1981	CF (ppm) [1] 1980	Manufacturer
NO	Pall Mall KS Filter Soft	(2)	23	Suomen Tup.
	Pall Mall KS Filter Box	21		Suomen Tup.
	Pall Mall Mild	24	26	Suomen Tup.
	Petteroe's King Size	7	25	Tiedemanns
	Prince Box	10	18	Tiedemanns
	Prince Mild Special	6	13	Tiedemanns
RL	Winston Light 100 S	(2)	6	Reynolds
	Cedars	(2)	15	Unknown
SF	Colt	(2)	20	Rettig STR
	Kent	(2)	16	Rettig STR
	L et M Box	(2)	3	STO Helsin
SI	Carlton 100 S	(2)	140	American T.
	Kent Golden Light	(2)	10	BAT
	Winston King Size	(2)	10	Reynolds
SW	Blend	21	32	Swedish T.
	Blend Extra	39	26	Swedish T.
	Commerce Light	10	20	Swedish T.
	Prince	21	18	Swedish T.
	Salem Light Menthol	37	42	Reynolds
CH	Camel Filters	26	23	Reynolds
	Camel Mild	(ND)	18	Reynolds
GR	Astor	(ND)	9	Papastrato
	Old Navy	40	80	Papastrato

ND = Not Detectable

(1) CF was determined by gas chromatography and confirmed by GC/MS

(2) cigarettes not received

0001439722

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : NITRATE-REDUCTION BY CONTROLLED FERMENTATION

PERIOD COVERED : OCTOBER 17 - NOVEMBER 16, 1981

WRITTEN BY : SCHULTHESS-D. (DIS)

---

1. LEAR TRIALS 11 AND 12

In order to avoid a recurrence of the clogging problems encountered during LEAR trial 10 (1), the pH of the fermentation and thus all the liquid flow in the system (extract recycling) was brought up to 5.0. In this way the clogging of the piping could be reduced to a great extent.

However, after one week's continuous denitration (LEAR trial 11), the fermenter was found to be heavily contaminated with bacteria. The trial was stopped and restarted in the same conditions (LEAR trial 12). Again, after one week, this trial had to be stopped for the same reason.

2. ORIGIN OF THE CONTAMINATION

The following tests were made in order to determine the origin of the contamination :

- Candida utilis agar slants, used for starting up the process were checked for purity and found to be in order.
- Shaken flask cultures were checked for purity and were not always found to be in order. The sterilization and handling will be reviewed.
- The 20-l fermenter was checked for sterility. It was heavily contaminated after 2 days. The sterilization and handling will be reviewed.
- The citric acid used for pH control of the 20-l fermenter proved to be contaminated. All the citric acid used in future will be sterilized.

Ф00014392З

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

- Chemap personnel checked the 750-l fermenter and found several points to be unsatisfactory (2). A sterility test will be made.

- The ingredients and extract were checked for sterility after they had passed through the sterilization level and the mixing vessel. Plate counts did not reveal the presence of any viable organisms in these liquids.

3. NITRATE MONITORING

The nitrate monitoring system was installed in the pilot plant. At present it is only used to record the nitrate levels in the extract after extraction. The proportional addition of glucose will be performed at a later stage.

4. REFERENCES

1) Luthi-N, Monthly Report, Pilot Plant Operations, October 1981.

2) Letter from Chemap to Schulthess-D. dated November 12, 1981.

DIS/jig/NOVEMBER 27, 1981

0000143974

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : PILOT-PLANT OPERATIONS

PERIOD COVERED : OCTOBER 24 - NOVEMBER 25 1981

WRITTEN BY : Lüthi-N. (NIL)

---

1. EQUIPMENT

1.1. Extract Clean-up

The Sweco vibrator purchased for cleaning up the extract at the outlet of the extractor arrived on November 13 and was installed.

1.2. Fermentor

The gasket of the agitator had to be replaced.
Due to infection problems encountered during the fermentation of the strip-extract, assistance was given by two Chemap engineers during a sterilization test of the fermentor. In general, our sterilization procedure was found to be satisfactory. Nevertheless, the engineers from Chemap were able to give us some advice on this matter (1).

1.3. Sterilization Line of the Extract

Even when using different cleaning products to clean the sterilization line, some deposits were still found especially in the tubes of the sterilizer. It was therefore decided to rent a special cleaning apparatus which uses high-pressurized jets of water and this gave satisfactory results.

1.4. Centrifuge

The rented Westfalia centrifuge arrived on November 16 and was installed. First trials have already given better results than those obtained with the existing Alfa-Laval centrifuge.

2. DRYING OF STRIPS

After some discussion with the supplier of tobacco drying equipment about our strip-drying problem, it was finally decided to purchase the drying chamber they proposed which works batch-wise.

3. REFERENCE

1. Letter from Dietrich-A to Schulthess-D, November 12 1981

NIL/sde/NOVEMBER 27 1981

U. Lüthi

0001143975

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : CIGARETTE DEVELOPMENT 2

PERIOD COVERED : SEPTEMBER 29 - NOVEMBER 26, 1981

WRITTEN BY : Frattolillo-A. (ANF)

---

400 COMMONWEALTH 4
420 COMMONWEALTH 9

This report summarizes the results and some of the events leading to the test program which took place at FTR during the period of the 5th to the 16th of October 1981.
The tests were witnessed by J. Etheridge, M. Evans, J.-P. Fatton, Z. Singer and A. Stathopoulos and myself.
They will actively participate in the development and evaluation of the test results concerning the proposed objective.

Objective

The development of two Virginia cigarettes delivering 4 and 9 mg UK tar, to compete with UK'S 9 mg SILK-CUT and 17 mg B & H respectively.

Description of samples and results

Samples made prior to this date were evaluated and new prototypes were produced based on these evaluations.
It was the opinion of all the participants that for the achievement of the objective and the accomplishment of the project, qualitative and quantitative improvements in the smoke were necessary.

For the task, two tobacco blends were established and filed under :

1) COMMONWEALTH 4 No GB1040002NO2, batch No 949

2) COMMONWEALTH 9 No GB1042003NO2, batch No 950

The above-mentioned blends were later incorporated in cigarettes of different designs having a format of :

7.95 mm diameter

20/25 mm filter length

84.4 mm cigarette total length

A general view of the produced cigarette prototypes, with the construction materials used, is given in the attached flow-charts.

Φ0001423976

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Tobacco strips

The strips of the chosen tobacco grades, making up the blends, were preconditioned in the vacu-dyne for ca. 30 min. The strips having left the vacu-dyne at ca. 70 °C and 16 % H_2O content were then fed through the conditioning cylinder for addition of H_2O under the action of steam, prior to entering the blending box. From the blending box, the strips, at ca. 19 % H_2O content, were conveyed to the cutter previously adjusted to give a cut-size of ca. 0.7 mm (36 ci.).
Thereafter, the cut-rag, with the addition of improved CRS (cut-rolled-stems), passed through the dryer and at the exit had ca. 15 % H_2O content.

Tobacco stems

The blend of the whole stems passed through the inclined screw conveyor-conditioning system and then through the flattening-rollers set at +/- 0.2 mm clearance, then entered the cutter with ca. 32 % H_2O content.
The cutter, on the stem-line, was adjusted to give a cut-size of ca. 0.17 mm (149 ci.). From there it passed into the superwetting cylinder where the moisture level of the CRS rose to ca. 47 %. At this moisture, the CRS were bulked for a period of 45 min. to help the surface H_2O completely penetrate the strands.
After leaving the bulking-box, the CRS were fed through the gas roasting system and upon exit they had ca. 19 % H_2O content. At this moisture, the improved CRS were incorporated into the cut-rag before entering the final dryer.
The finished cut-fillers, with additions of ET at two different levels, had an average of 14.8 % moisture content.
In the preparation and processing of all the blend components, special attention was given to the temperature and moisture levels at the various processing steps as such blends did not include casings nor PC ingredients.

2000143977

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

COMMONWEALTH 4 : The blend : 38 % FC (US)
27 % FC
25 % ET
10 % St

The cut-filler derived from the above formula and filed under No GB1040002NO2 was split into two aliquots, one of which was separately treated with AC-95-E. Therefore, with the above blend, unflavoured cigarettes (version A) and flavoured ones (version B) were produced, analyzed and taste tested.
Among the many prototypes tested, the ones hereunder described were chosen for their positive physical and organoleptic characteristics.

PROTOTYPE NO		36 P	42 P
Batch No		949	949
Version		A	B
CUT-FILLER			
TA	%	2.26	2.25
RS	%	13.4	14.3
$N-NO_3$	%	0.03	0.03
CIGARETTE			
Format : Diameter	mm	7.95	7.95
Filter length	mm	25	25
Total length	mm	84.4	84.4
Filter type		2.5 Y / 40	2.5 Y / 40
Cigarette paper		Mauduit 110-6 / CP ------	
Plug wrap		FU-POV 100	FU-POV 100
Total weight	mg/cig.	976	981
Tobacco weight	mg/cig.	724	724
Total RTD	mm WG	81	80
Filter RTD	mm WG	85	84
Dilution	%	63	62
Compressibility at 12 % M		3.63	3.15
Filler density at 12 % M	mg/ml	242	243
SMOKE			
DPM	mg/cig.	5.3	5.7
SN	mg/cig.	0.52	0.54
Tar	mg/cig.	4.8	5.2
CO	mg/cig.	4.3	4.2
NO	mg/cig.	0.03	0.03
Puff count		10.7	10.3

0001143978

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

COMMONWEALTH 9 : The blend : 42 % FC (US)
33 % FC
10 % ET
15 % St

The cut-filler derived from the above formula and filed under No GB1042003NO2 was split into two aliquots, one of which was separately treated with AC-95-E. Therefore, with the above blend, unflavoured cigarettes (version A) and flavoured ones (version B) were produced, analyzed and taste tested.
Among the many prototypes tested, the ones hereunder described were chosen for their positive physical and organoleptic characteristics.

PROTOTYPE NO		40 P	52 P	54 P
Batch No		950	950	950
Version		A	B	B
CUT-FILLER				
TA	%	2.30	2.20	2.26
RS	%	14.0	13.8	14.3
$N\text{-}NO_3$	%	0.03	0.03	0.03
CIGARETTE				
Format : Diameter	mm	7.95	7.95	7.95
Filter length	mm	25	25	25
Total length	mm	84.4	84.4	84.4
Filter type		2.5 Y / 48 ---		2.5 Y / 40
Cigarette paper		Mauduit 110-6 / CP ----------		
Plug wrap		FU-POV 40 ----		FU-POV 100
Total weight	mg/cig.	1013	1012	1003
Tobacco weight	mg/cig.	745	745	748
Total RTD	mm WG	108	113	94
Filter RTD	mm WG	101	95	88
Dilution	%	34	35	44
Compressibility at 12 % M		3.71	3.29	3.61
Filler density at 12 % M	mg/ml	248	251	251
SMOKE				
DPM	mg/cig.	9.7	10.2	9.2
SN	mg/cig.	0.95	0.98	0.88
Tar	mg/cig.	8.75	9.2	8.3
CO	mg/cig.	10.4	9.5	8.3
NO	mg/cig.	0.03	0.05	0.05
Puff count		9.0	10.0	9.8

0001439/9

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

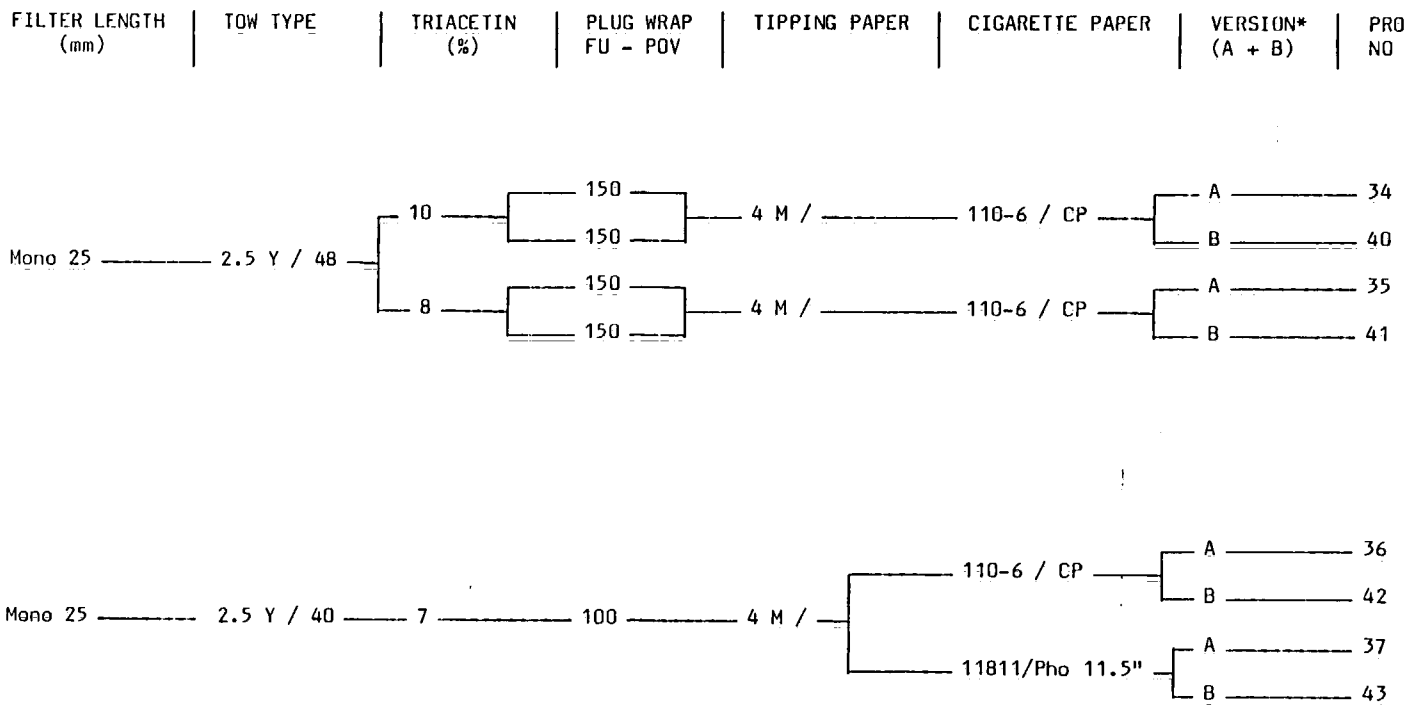
Comments

Additional work will be carried out using different filters. COMMONWEALTH 4 in particular was found to be slightly lacking in mouth response. Meanwhile, a screening panel test is under way in the UK with the three chosen prototypes of COMMONWEALTH 9 vs. B & H and the two prototypes of COMMONWEALTH 4 being tested against each other.

00014398O

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

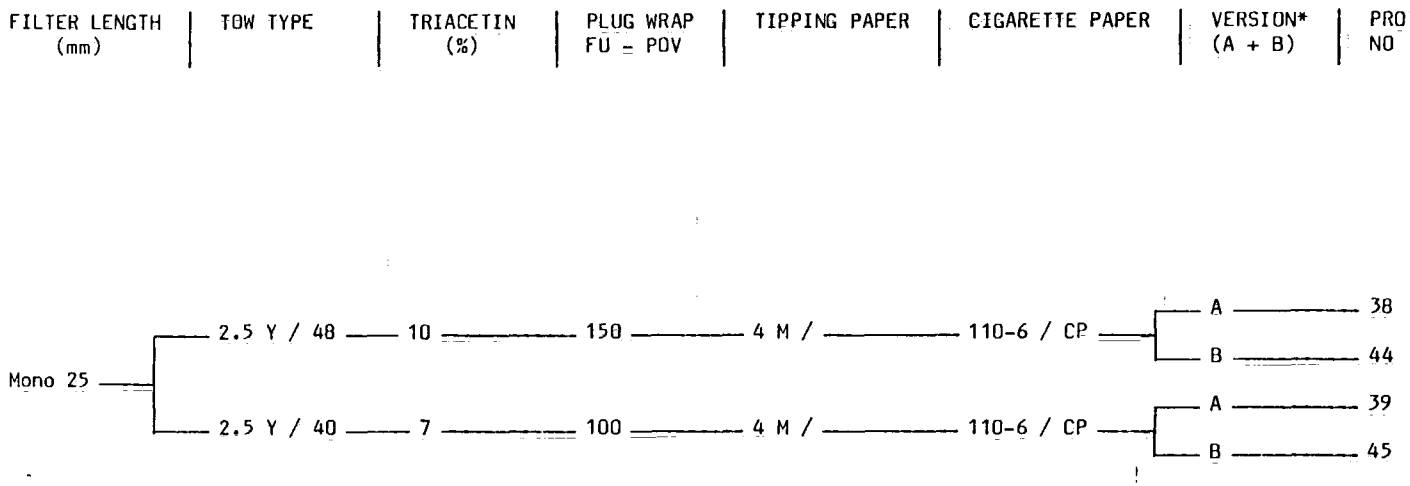
COMMONWEALTH 4 - FLOW-CHART OF PROTOTYPES PRODUCED INCORPORATING TOBACCO BLEND NO GB1040002NO2, BATCH 950



* : Version A = Unflavoured
Version B = Flavoured

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

COMMONWEALTH 4 - FLOW-CHART OF PROTOTYPES PRODUCED INCORPORATING TOBACCO BLEND NO GB1042003N02, BATCH 949

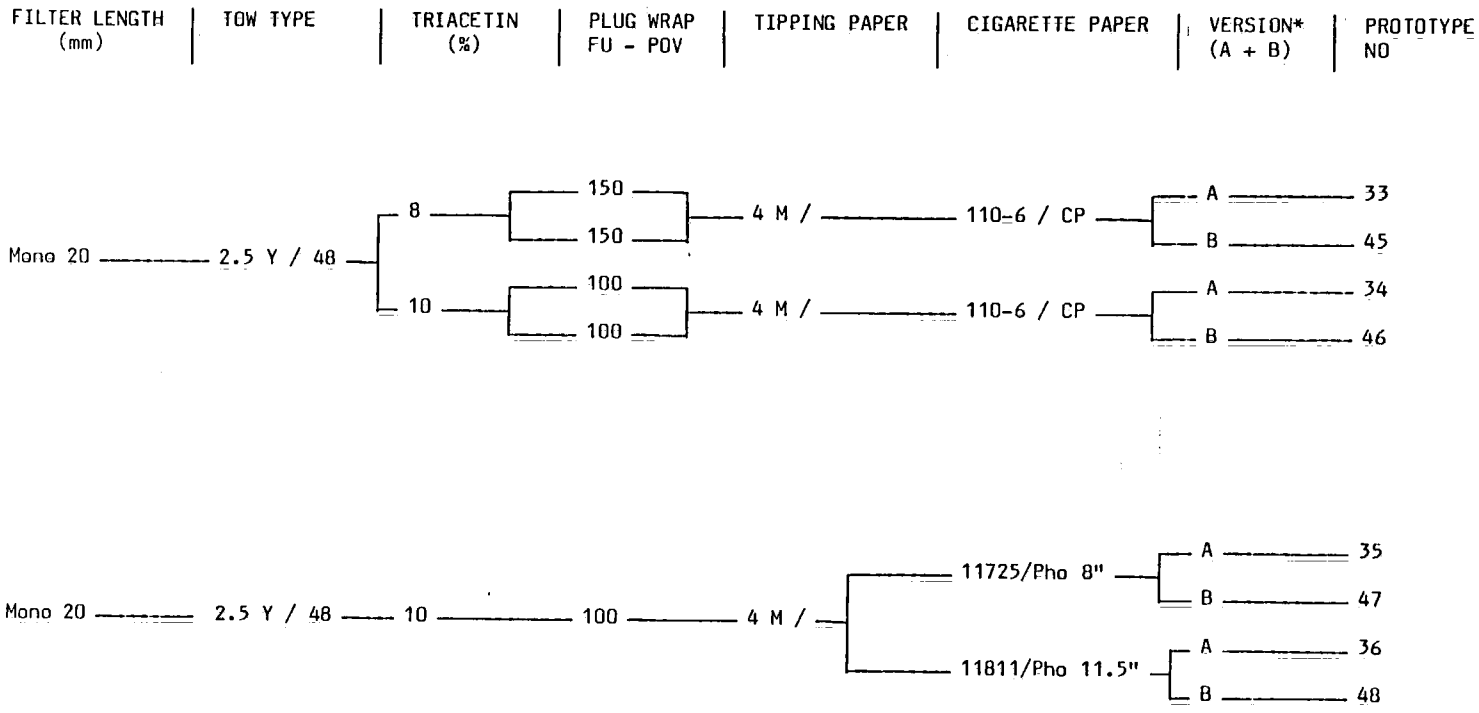


* : Version A = Unflavoured
Version B = Flavoured

B0001439B2

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

COMMONWEALTH 9 - FLOW-CHART OF PROTOTYPES PRODUCED INCORPORATING TOBACCO BLEND NO GB1042003NO2, BATCH 949

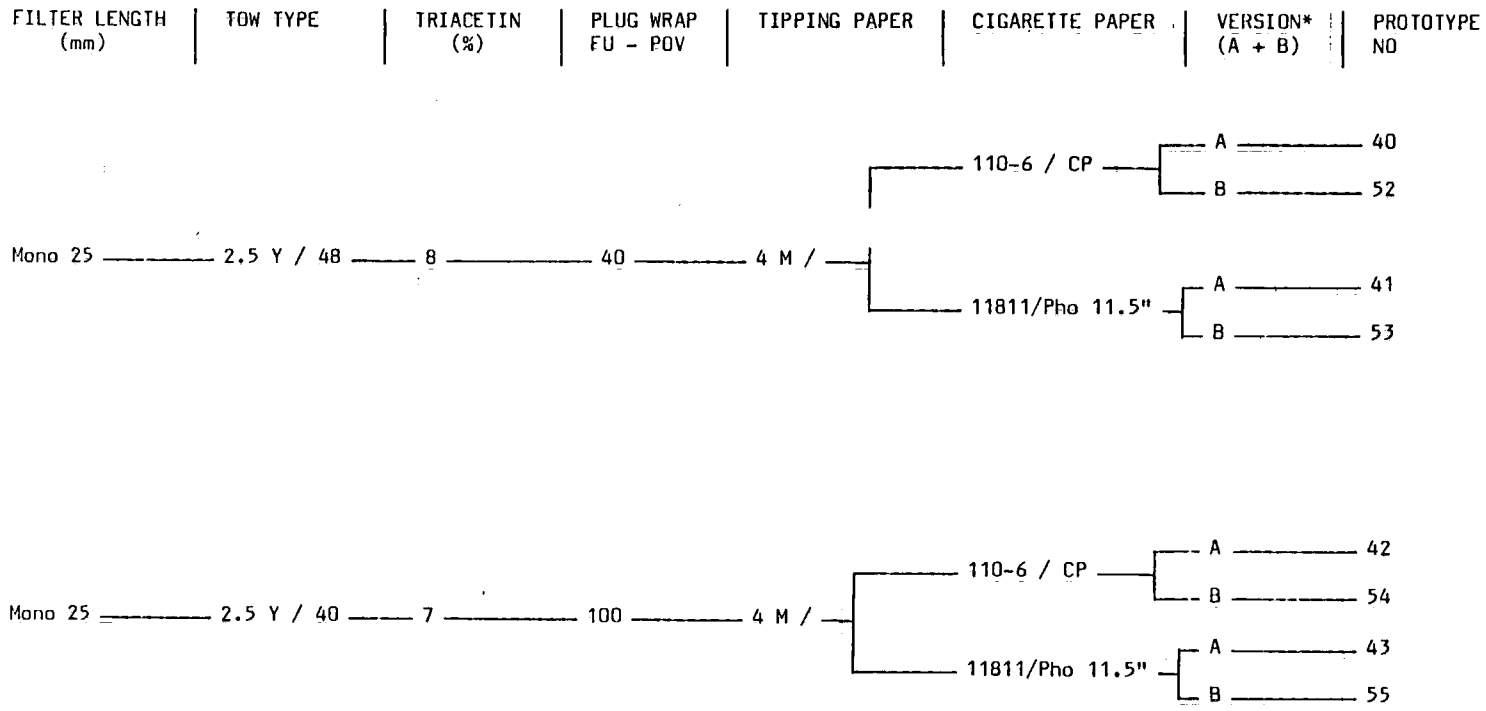


* : Version A = Unflavoured
Version B = Flavoured

10001433983

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

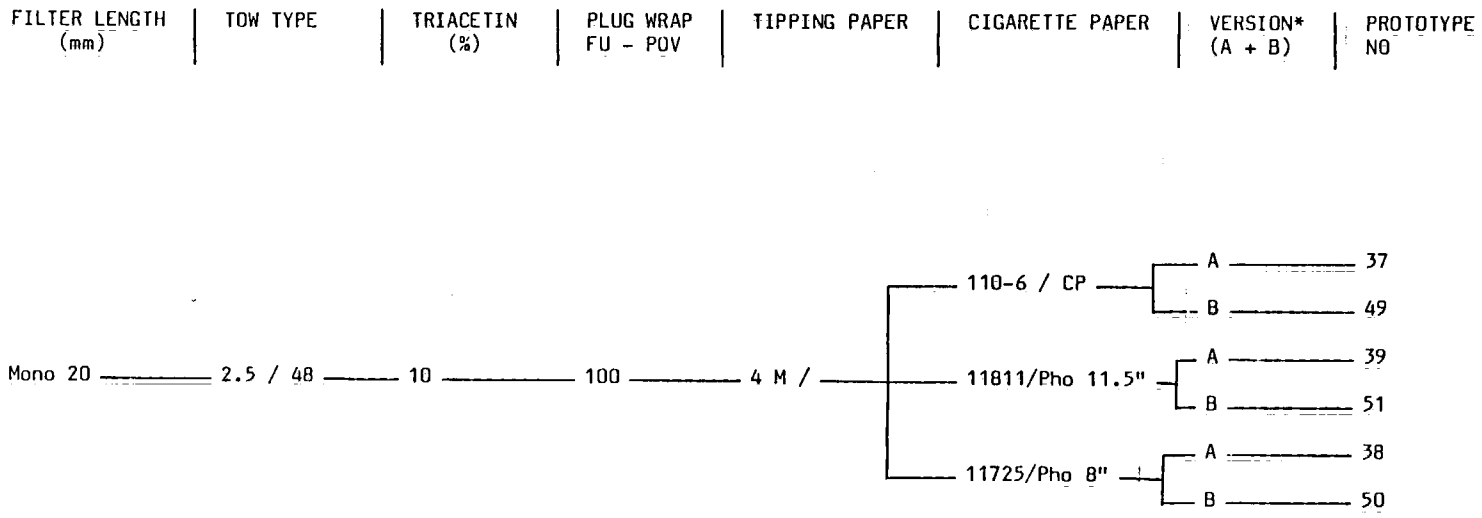
COMMONWEALTH 9 - FLOW-CHART OF PROTOTYPES PRODUCED INCORPORATING TOBACCO BLEND NO GB1042003N02, BATCH 949



* : Version A = Unflavoured
Version B = Flavoured

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

COMMONWEALTH 9 - FLOW-CHART OF PROTOTYPES PRODUCED INCORPORATING TOBACCO BLEND NO GB1040002N02, BATCH 950



* : Version A = Unflavoured
Version B = Flavoured

000143985

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

208 TENNIS 23 UK

Objective

To develop a diluted MARLBORO cigarette by performing intermediary steps and achieve the quality of the Pan-European cigarette by using a special flavour system on tobacco only. This would eliminate the use of flavoured filters and still conform to the Hunter list.

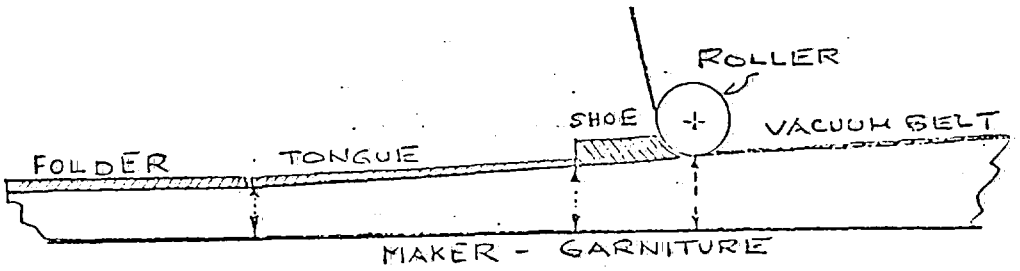
Description of samples and results

Cigarette prototype 23, developed at FTR using tobacco blend No GB0120803N02, was accepted by Panel A Lausanne and UK Marketing.
On a later date, this prototype was given to be reproduced at PMH, in Bergen op Zoom, the latter being planned as the future production center for the UK market.
Following the specifications supplied by FTR, prototype 23 was produced at PMH and sent to FTR for complete evaluation. The results obtained showed lower physical qualities than those produced at FTR, ie. tobacco compressibility and cigarette loose ends. This was probably due to :

a) greater fluctuations in temperature and moisture outputs during tobacco processing that negatively affected the quality of the cut-filler.

b) the contribution of the quality of ESTHER to the cut-filler.

c) the maker garniture, ie. the adjustment of the transfer section of tobacco from the vacuum belt to the folder belt, under the shoe into the tongue, to gradually compress the tobacco stream to just about the same height it would have at the exit of the tongue. This would not only reduce the dense float, but would also help to reduce soft spots in the rod (see the sketch below).



0001143986

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

We did not have enough time to check into the above-mentioned points. Therefore, we suggested reproducing prototype 23 at four different tobacco weights. This helped to obtain, in a relatively short time, cigarettes of good physical qualities in the class of 789 mg tobacco weight (1020 mg total cigarette weight), delivering taste and analytical values within the objective.
The following is an up-dated summary of the results obtained on TENNIS 23 produced at BTR and those produced at PMH.

00014398?

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PRODUCTION DATE		SEPT. 1980 (FTR)	FEB. 1981 (FTR)	OCT. 1981 (FTR)	NOV. 1981 (FTR)	OCT. 1981 (PMH)
PROTOTYPE NO		23 P	23 C	23 T	REPEAT (23 T)	MLB-03
VERSION		B	B	B	B	B
CUT-FILLER						
TA	%	2.03	2.09	1.95	1.87	1.96
RS	%	10.3	11.3	10.4	10.4	11.1
$N\text{-}NO_3$	%	0.18	0.15	0.17	0.16	0.16
CIGARETTE FORMAT						
DIAMETER	mm	7.97	7.97	7.97	7.97	7.97
FILTER LENGTH	mm	20	20	20	20	20
CIGARETTE TOTAL LENGTH	mm	84.4	84.4	84.4	84.4	84.4
CIGARETTE						
FILTER TYPE		3.4 I / 46	3.4 I / 46	3.4 I / 46	3.4 I / 46	3.4 I / 46
CIGARETTE PAPER		WATTENS 60	WATTENS 60	WATTENS 60	WATTENS 60	110-6
TIPPING PAPER		Z3 / 30	Z3 / 30	Z3 / 30	Z3 / 30	Z3 / 30
PLUG WRAP		FU-POV 40 L	FU-POV 40 L	FU-POV 40 L	FU-POV 40 L	FU-POV 40 L
CIGARETTE TOTAL WEIGHT	mg/cig.	1005	980	980	990	1021
TOBACCO WEIGHT	mg/cig.	770	755	762	770	789
TOTAL RTD	mm WG	104	101	95	104	108
FILTER RTD	mm WG	76	62	61	59	68
DILUTION	%	10	6	11	10	11
COMPRESSIBILITY AT 12 % M	mm	3.22	3.37	3.32	3.32	3.69
FILLER DENSITY AT 12 % M	mg/ml	240	238	239	240	247
SMOKE						
TPM	mg/cig.	18.1	18.2	17.0	17.8	16.8
DPM	mg/cig.	16.6	16.4	15.7	16.2	15.4
SN	mg/cig.	1.33	1.31	1.19	1.24	1.20
TAR UK	mg/cig.	15.6	15.4	14.8	15.3	14.5
CO	mg/cig.	15.3	15.9	15.0	15.6	14.1
NO	mg/cig.	0.20	0.21	0.18	0.18	0.18
PUFF COUNT		8.9	8.3	8.3	8.4	8.7

ANF/cap/11.30.1981

10001433988

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

The overall evaluation of the prototypes described on the previous page proved to be positive, thus making prototype 23 the first accepted step toward the final one (Pan-European).

In parallel, TENNIS prototype 53 UK was developed at FTR, accepted by Panel D at equal preference against the MLK CH and this was later confirmed in Richmond.
To date, prototype 53 is regarded as the final step in the development of a diluted MARLBORO for the UK, incorporating a fully cased and flavoured cut-filler, conforming to the Hunter list.

Description of samples and results

By using the cut-filler derived from tobacco blend No GB0120804N02, batch No 958 and the Swiss MARLBORO construction, cigarette prototype 53 was produced.
For the making of the current MARLBORO UK, the production center in Silvertown was asked to supply FTR with the following materials :

1) 200 kg of standard cut-filler MLK-09 UK

2) 20 bobbins of cigarette paper Mauduit 110-6

3) 2 bobbins of tipping paper, code No 32-0165

At the same time, three boxes of flavoured filters UK were dispatched from PMB (Philip Morris Belgium) to FTR.

The design and the results of the above-mentioned prototypes are shown in the table on the next page.

2000143989

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PRODUCTION DATE		OCT. 1981 (FTR)	OCT. 1981 (FTR)	NOV. 1981 (FTR)
PROTOTYPE NO		MLK-09 (CURRENT)	53 T	REPEAT (53 T)
VERSION		A	A	A
CUT-FILLER				
TA	%	1.96	1.90	1.91
RS	%	9.5	8.8	7.1
$N\text{-}NO_3$	%	0.12	0.26	0.27
CIGARETTE FORMAT				
DIAMETER	mm	7.95	7.95	7.95
FILTER LENGTH	mm	20	20	20
CIGARETTE TOTAL LENGTH	mm	84.4	84.4	84.4
CIGARETTE				
FILTER TYPE		3.4 I / 46	3.4 I / 46	3.4 I / 46
CIGARETTE PAPER		MAUDUIT 110-6	WATTENS 60	WATTENS 60
TIPPING PAPER		NON POROUS	Z3 / 60	Z3 / 60
PLUG WRAP		NON POROUS	FU-POV 24 L	FU-POV 24 L
CIGARETTE TOTAL WEIGHT	mg/cig.	1010	1063	1074
TOBACCO WEIGHT	mg/cig.	779	841	853
TOTAL RTD	mm WG	114	109	113
FILTER RTD	mm WG	67	67	62
DILUTION	%	NONE	17	18
COMPRESSIBILITY AT 12 % M	mm	3.58	2.89	====
FILLER DENSITY AT 12 % M	mg/ml	243	259	264
SMOKE				
TPM	mg/cig.	18.0	17.2	17.8
DPM	mg/cig.	16.5	15.6	16.2
SN	mg/cig.	1.21	1.06	1.19
TAR UK	mg/cig.	15.6	14.9	15.3
CO	mg/cig.	16.2	15.0	15.4
NO	mg/cig.	0.16	0.25	0.29
PUFF COUNT		8.1	9.0	9.4

ANF/cap/11.30.1981

Φ0001433990

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Comments

The issue of Panel D's evaluation (September 14, 1981) conducted on prototype 53 (special USA flavour system) vs. the MLK CH showed prototype acceptance at equal preference as for the current MLK CH. It was then decided to market test in the UK the 53 against the current MLK UK and the 23 (MLB-03/PME) against the 53.
The required quantities of packed and coded cigarettes were dispatched to London on November 3, 1981.

ANF/cap/NOVEMBER 30, 1981

0000143991

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : CIGARETTE DEVELOPMENT 3

PERIOD COVERED : SEPTEMBER 28 - NOVEMBER 25, 1981

WRITTEN BY : Nagel-P. (PHN)

---

391 BUBBLE GR

Objective

To develop an American blend-type cigarette in the LTN sector.

Summary

Following the extremely important anti-smoking campaign led by the Minister of Social Welfare in Greece, our competitors recently launched several LTN brands supported by a lively publicity campaign centred on low tar and SN figures. In reaction to these developments, it is planned to launch a light MARLBORO and MERIT which should be produced by using the non-tobacco materials available in the EEC market only.

Description of samples and results

Tobacco blend

The tobacco blend used No GR0239101N10 was processed in two steps :

1) The "basic blend", comprising 60 % of the total blend and containing the total Burley amount, was prepared at FTR. After having passed through the vacu-dyne, the Burley tobacco was treated according to MARLBORO specifications, receiving ML Burley casing and ML Burley top flavour, and was mixed with the "strip" part of the basic blend in the "Blending Box". The tobacco leaf blend thus obtained was dried down to 13 % MC and shipped to Papastratos, Greece in cardboard boxes.

2) The remaining 40 %, consisting of local tobaccos, was added and the Pre-Cutting and After-Cutting MARLBORO solutions were sprayed on the total blend. 200 Kg of the finished cut-filler was sent back to FTR for cigarette development.

Φ0001439992

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Cigarette prototypes

The construction of the prototypes produced, in which blend No GR0239101N10 was incorporated, followed the MLZ01 cigarette-making specifications. Apart from the standard 110-6 cigarette paper, another one, Pela S 130 M, was tested on this cigarette.
The version using the latter was chosen as the candidate for the possible launch.
For a description of the prototypes, see the table on the next page.

0000143993

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT NAME		B U B B L E G R	
PROJECT NO		3 9 1	
PROTOTYPE NO		1 P	2 P
BLEND NO		GR0239101N10 (A)	GR0239101N10 (A)
TA	%	1.29	1.36
NITRATE-NITROGEN	%	0.26	0.28
REDUCING SUGARS	%	8.9	9.5
FORMAT : DIAMETER	mm	7.95	7.95
FILTER LENGTH	mm	25	25
CIGARETTE LENGTH	mm	84	84
TOTAL WEIGHT	mg/cig.	1118	1119
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	816	815
CIGARETTE RTD	mm WG	119	121
DILUTION	%	32	32
CIGARETTE PAPER		110-6	Pela S 130 M
TIPPING PAPER		Z 4 / 120	Z 4 / 120
FILTER : TYPE		Simple (MERPC-100)	Simple (MERPC-100)
TOW		2.5 Y / 48'000	2.5 Y / 48'000
PAPER		FU-POV 40 L	FU-POV 40 L
RTD	mm WG	100	104
TAR	mg/cig.	7.8	8.0
SN	mg/cig.	0.56	0.54
CO	mg/cig.	9.8	11.3
NO	mg/cig.	0.20	0.19
Puff count		9.2	8.8

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

26.11.1981

0001439394

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

271 COLORADO

Objective

To improve the taste quality of MURATTI EXTRA (MAG) while decreasing the smoke delivery.
Tar : 3.0 mg/cig.
SN : 0.3 mg/cig.
CO : less than 5 mg/cig.
Puff count : more than or equal to 7.5
Format : 7.95 / 25 / 84

Summary

Following the trend towards milder products (especially 0 - 5 mg tar), the Swiss Marketing people asked for a development of the new MAG with 3 mg tar (currently with 5 mg) while keeping the same good taste impact.
Using new tobacco blend No CH0427103N02, containing 27 % of ET, trials were carried out with several double filter combinations (the PSP filter is currently used). No positive results were obtainied as far as the organoleptic qualities were concerned, as some impact was lacking during the first puffs.
Therefore, it was agreed to use a triple filter for this product. Such a filter construction, which is not yet commonly used in the cigarette industry, gives a possibility to use the optimal combination of filtering materials in order to maximize retention capacity and still have a reasonable draw-resistance (RTD). On the practical side, this means a cigarette delivering good taste with the first puffs and having low smoke figures. Using tobacco blend No CH 0427105N02 (corresponding to the above-mentioned No CH0427103N02 in which the reconstituted tobaccos, comprising 15 % of the total blend, were replaced by improved stems), triple filters of different tow item combinations were tested.
Of all the prototypes produced, No 95 P was selected and furthermore its flavoured version, No 98 P, was produced. Both prototypes were tested against current MAG in a blind (cigarettes without any identification) product test whose results did not show any clear preference for one rather than for the other products by each of the different groups of smokers (men, women, MAA, MAG smokers, etc.).

000143995

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

The-smokers of the standard MAG missed the special dry tas' which is probably due to the additives used in the chamber of a PSP filter (activated charcoal, silicagel, respectively 40 % and 60 %). For the above-mentioned reasons, the current MAG cannot be taken from the market and substituted by one of the two prototypes.
The development work had to be re-started with the same objective, but based on a PSP filter.

Description of samples and results

A series of prototypes, deriving from candidate No 98, were produced using the standard PSP filter of the MAG and different porosity tipping papers.
Prototype No 107 was selected as being within the target taste and analytical objectives.
The cigarette is being product tested against MAG01.

Please find on the next pages :
- Description and main physical and analytical characteristics of the prototypes mentioned.
- Designs of PSP and Triple Filter.

P. Vogel

PHN/cap/NOVEMBER 26, 1981

2000143996

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT NAME : C O L O R A D O		PROJECT NO : 271	PROJECT LEADER : PHN	DATE : November 26, 1981
PROTOTYPE NO		MAG 01 (C 45)	95 T (N 36)	98 T (V 63)
BLEND NO		039-271MA002	CH0427105N02 (A)	CH0427105N02 (C)
TA	%	1.46	1.58	1.63
NITRATE-NITROGEN	%	0.17	0.21	0.19
REDUCING SUGARS	%	12.2	8.7	8.6
FORMAT : DIAMETER	mm	7.95	7.95	7.95
FILTER LENGTH	mm	25	25	25
CIGARETTE LENGTH	mm	84	84	84
TOTAL WEIGHT	mg/cig.	1187	919	923
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	764	599	596
CIGARETTE RTD	mm WG	118	82	77
DILUTION	%	37	63	65
CIGARETTE PAPER		W 100	W 70	W 70
TIPPING PAPER		Z4 / 120	6 x M. 0.3 . 3.5	6 x M. 0.3 . 3.5
FILTER : TYPE		PSP	TRIPLE	TRIPLE
TOW		2.5 Y / DICO	2.5 Y / 48 - 5.0 X / 40 - 2.5 Y / 55	
ADDITIVE		ACPG	Charcoal Pilot ----------	
PAPER		Ecusta 634	FU-POV 100	FU-POV 100
RTD	mm	116	104	100
TAR	mg/cig.	4.6	3.0	2.8
SN	mg/cig.	0.35	0.24	0.21
CO	mg/cig.	9.5	4.5	3.5
NO	mg/cig.	0.13	0.07	0.07
PUFF COUNT		8.2	7.6	7.9

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

b0001439997

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT NAME		COLORADO	COLORADO
PROJECT NO		271	271
PROTOTYPE NO		MAG 01 (M 42)	107 T (H 24)
BLEND NO		039-271MA002	CH0427105N02
VERSION		A	C
TA	%	1.45	1.60
NITRATE-NITROGEN	%	0.14	0.25
REDUCING SUGARS	%	10.7	8.2
FORMAT : DIAMETER	mm	7.95	7.95
FILTER LENGTH	mm	25	25
CIGARETTE LENGTH	mm	84	84
TOTAL WEIGHT	mg/cig.	1142	1023
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	743	606
CIGARETTE RTD	mm WG	113	100
DILUTION	%	39	56
COMPRESSIBILITY AT 12 % O.V.	mm	2.90	2.87
CIGARETTE PAPER		W. 100	W. 70
TIPPING PAPER		Z4/120	4 x M. 0.5 . 3.5
FILTER : TYPE		PSP (MAG-100) ----------	
TOW		ACETATE / CAF ----------	
ADDITIVE		CHARCOAL / POLYGEL ----------	
PAPER		ECUSTA 634 ----------	
RTD	mm WG	114	114
TAR	mg/cig.	4.8	3.4 (3.4)
SN	mg/cig.	0.36	0.27 (0.25)
CO	mg/cig.	9.9	6.0 (4.9)
NO	mg/cig.	0.13	0.12 (0.11)
PUFF COUNT		8.1	8.0 (7.8)

THE CIGARETTES ARE SMOKED ON A RM 20 PORTS.

() : ANALYTICAL FIGURES OF PROTOTYPE 107 B

0001433998

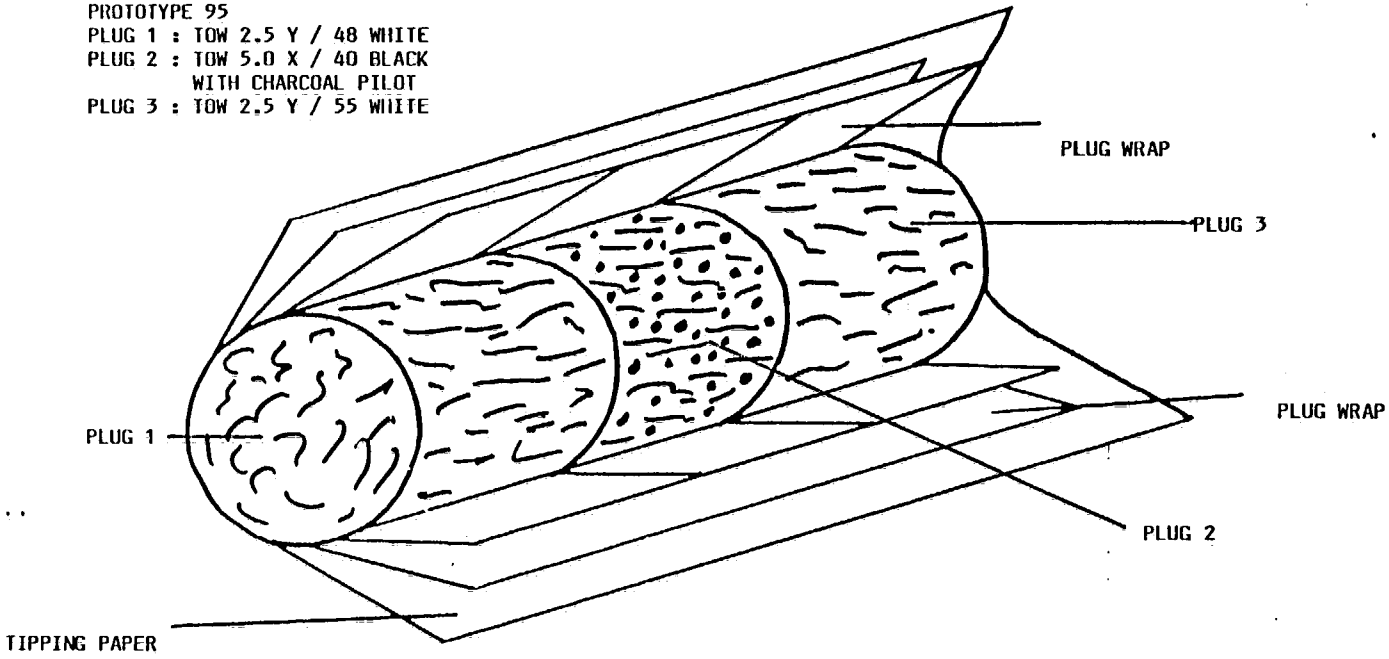
Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

TRIPLE FILTER

COLORADO

LEGEND

PROTOTYPE 95
PLUG 1 : TOW 2.5 Y / 48 WHITE
PLUG 2 : TOW 5.0 X / 40 BLACK
WITH CHARCOAL PILOT
PLUG 3 : TOW 2.5 Y / 55 WHITE



0001433999

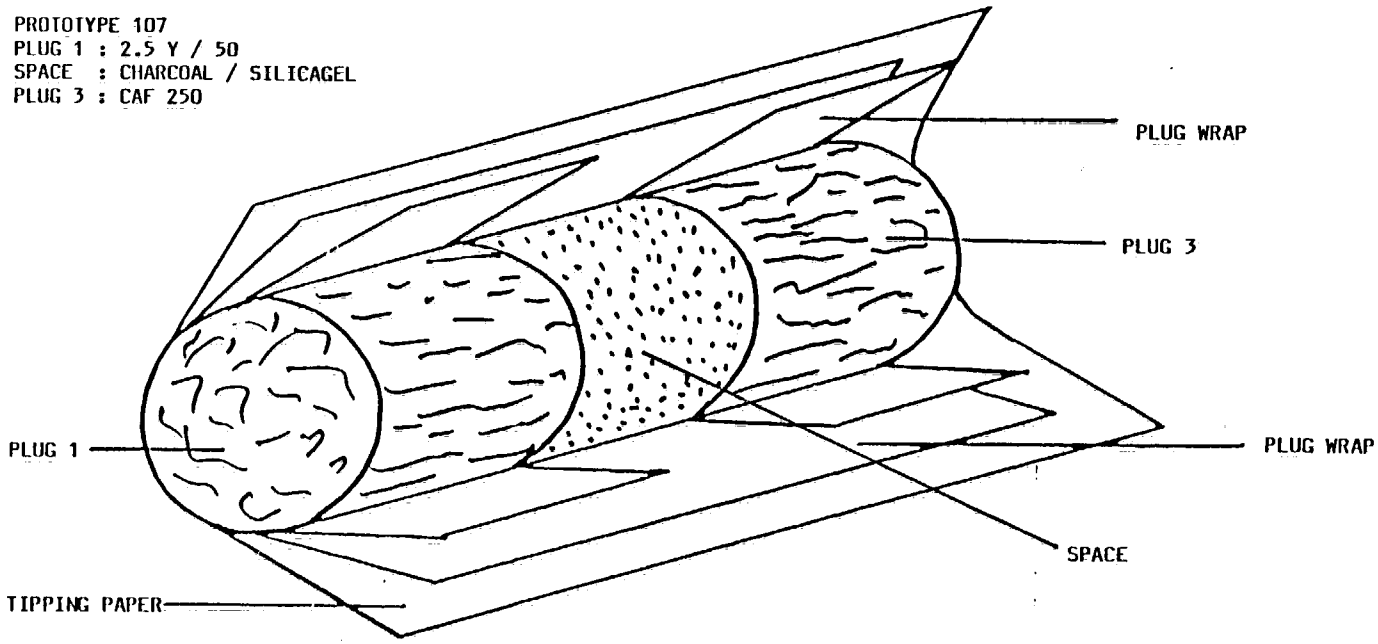
Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PSP FILTER

COLORADO

LEGEND

PROTOTYPE 107
PLUG 1 : 2.5 Y / 50
SPACE : CHARCOAL / SILICAGEL
PLUG 3 : CAF 250



00014400

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : CIGARETTE DEVELOPMENT 4

PERIOD COVERED : SEPTEMBER 25 - OCTOBER 26, 1981

WRITTEN BY : Toïmil-R. (RAT)

PME CIGARETTE DATA BANK

Objective

To introduce all the parameters of a project in the computer in order to be able to make the utmost use of the information on the projects.

Present situation

The introduction of the different "Technical Sheets" was started at the beginning of November 1981 and is continuing as planned. For the time being, groups 23 and 30 (plug wrap and cigarette papers) are memorized in the EDP system.
Up to now, 37 "Technical Sheets" concerning filter papers, 96 concerning cigarette papers and 71 concerning tipping papers have been memorized.

368 COSMOS

Objective

To help the Russians to develop an American-type cigarette for their market.

Summary

On the basis of prototype 39 P, a trial was carried out in order to evaluate a new filter produced at Erivan (USSR).

0001440001

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Description of samples and results

FILTER ANALYSES : Ex-URSS (ERIVAN)

		Specified	Found
RTD	mm H_2O	375	320
Diameter	mm	7.81	7.84
Length	mm	108	107
Total weight	mg/cig.	785 - 807	780
Total denier		39.000 Y	39.000 Y
Single denier		3.3	3.3

SMOKE ANALYSES

		39 P	35 P (trial)
DPM	mg/cig.	19.0	19.4
SN	mg/cig.	0.95	0.89
Tar	mg/cig.	18.0	18.5
Puff count		10.5	10.0
HCN	g/cig.	258	264
Aldehydes	mg/cig.	1.60	1.70

TOBACCO ANALYSES

TA	%	1.16	1.15
RS	%	9.4	9.7
NO_3-N	%	0.16	0.13
NH_3-N	%	0.2	0.2

Comments

The filters produced at Erivan (USSR) do not correspond to the specifications.
Analytically, there is no significant difference in the smoke yield. Only a taste evaluation could enable a difference between prototypes 39 P and 35 P, which differ only in the filter, to be found.

RAT/cap/NOVEMBER 25, 1981

0000144002

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : CIGARETTE DEVELOPMENT 5

PERIOD COVERED : OCTOBER 26 - NOVEMBER 23, 1981

WRITTEN BY : Du Bois-J.-H. (JHD)

E U C

Objective

- To establish a detailed study of our 1980 activities concerning "Marketing / Operations" and R & D projects.
- To study a system of planification which would enable each person concerned to know which things have to be done and when.

Results

APL's existing library has a CPM program and we tried to introduce our network into the system. This was unsuccessful and the problem will be studied with our APL specialist.

Follow-up

The problems still pending will be studied with IBM and FTR's EDP Department on November 27th 1981.
The problems will also be studied in the context of EDP's raw materials and specifications program.
Mrs. Flury and Mr. Davis have been contacted and we will look briefly at the problem on December 1st 1981.

00014403

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

383 HELIUM

Objective

To produce a 100-mm cigarette with a total weight of less than 850 mg/cig.

Results

The objective was achieved with prototype 3 P.
This prototype has a total weight of 824 mg, a compressibility of 3.59 mm, a puff count of 6.3 and a DPM of 9.3 mg.
The blend has 60 % of Burley ETNA in a MLF blend and the other specifications are the same as those of the MLH cigarette.

Follow-up

The puff count could be increased by using a slow burning rate cigarette paper.
We will try to perform a total expansion of a MLF blend.
Should this not succeed, a MLF blend will be produced by substituting the different types of tobaccos by the ETNA counterparts (FC and Burley).

2000144004

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

386 COCONUT

Objective

DPM : 14 mg/cig.
CO : lower than 10 mg/cig.
The other characteristics remaining, if possible, the same as those of MLF.

Results

A bale of 5.0 / 60'000 acetate has been received from the USA; filter rods and three cigarette prototypes have been produced.
Analytical results will be available within a few days.

Follow-up

Fast burning cigarette papers will be tested with the aim of decreasing the puff count and Filtrona has been asked to produce higher RTD segments on the COSTAR 2 filters.

0000144005

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

RE-BILLING

In order to re-bill the costs of Development to the different Marketings, a detailed study of our activities for the period of January 1st to October 31st 1981 has been made.
The key used for the calculation is : direct men x days / prototype.
For the period covered, we have a total of 3'568.5 direct men x days for a total of 946 prototypes which gives 3.7722 men x days/ prototype.

J. DuBois

JHD/cap/NOVEMBER 25, 1981

Φ0001440006

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : MATERIAL DEVELOPMENT

PERIOD COVERED : OCTOBER 28 - DECEMBER 1 1981

WRITTEN BY : Erkohen-E. (ELE)

---

1. NEW FILTRATION MATERIAL

1.1. Eastman Tow 5.0/60.000 Y

Search for a new filtration material in order to attain the objective of project COCONUT (386).

Summary

Based on the results given by the cigarette construction model for project COCONUT, trials were carried out with tows 8.0/64.000 Y and 8.0/80.000 R (1).

Although smoke objectives were attained by using the tow qualities mentioned above, the desired total RTD could not be achieved. Eastman submitted a 5.0/60.000 Y tow that will give a higher RTD, while maintaining filter efficiency at the same level.

Description of Samples and Results

On November 12 1981, trial runs were performed on a KDF II rod maker without any difficulty with the tow item mentioned above. The tow was evaluated on the basis of its capacity curve (see Fig. I).

MLF-CH cigarettes with 50% dilution were made with the filters produced at the optimum point, in order to determine the filter efficiency and the total RTD achieved. Results concerning these parameters are not yet available.

1.2 Eastman 2.5/40.000 Y Tow

Objective

2.5/40.000 Y tow evaluation. Possible replacement of the existing 3.4/46.000 I by this item.

0001440007

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

FIG. I.

Paper permeability: 100K

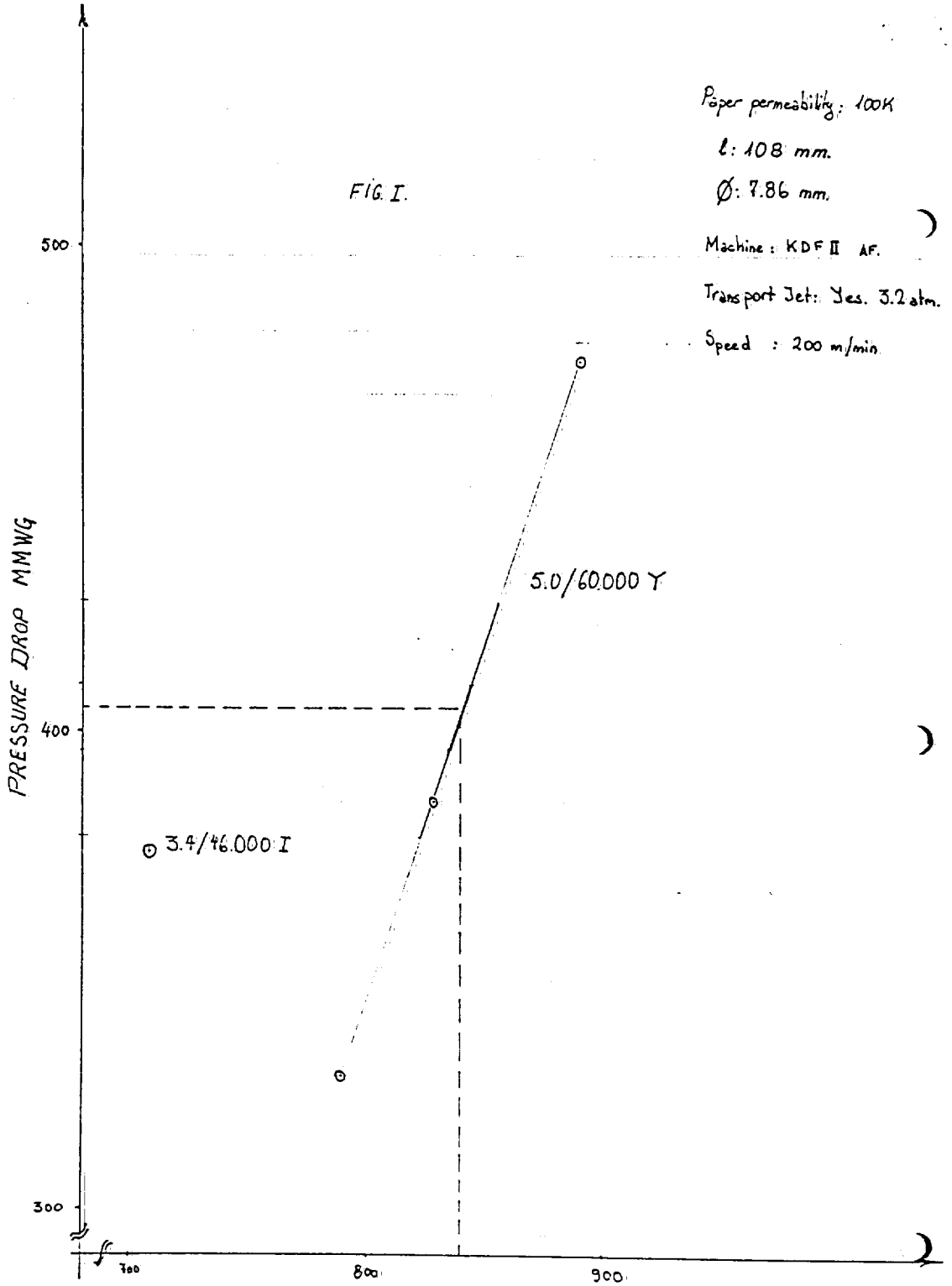
l: 108 mm.

Ø: 7.86 mm.

Machine: KDF II AF.

Transport Jet: Yes. 3.2 atm.

Speed : 200 m/min.



0001440008

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Summary

For an RTD of 375 mm WG an economy of 15% of cellulose acetate can be made by using this 2.5/40.000 Y tow instead of 3.4/46.000 I tow.

A mail-out test was prepared.

Physical Test and Smoke Yield Results

Both control results confirm former results obtained (2,3). Furthermore, no significant variation has been noticed between trial and control cigarettes.

Follow-up

Based on the results of the mail-out test, which are expected at the end of January 1982, a final decision will be made on this tow item.

1.3 Eastman 2.1/42.000 Y and 3.0/48.000 Y

Objective

To serve new product development.

Summary

Lately in several new product development projects we were confronted with a problem of high total cigarette RTD. In order to reduce this effect, the above-mentioned tows were ordered from Eastman.

Follow-up

The above-mentioned items will be evaluated on the basis of their capacity curve and a special report will be written as soon as the results are available.

References

1. Erkohen-E. Monthly Report October 1981
2. Erkohen-E. Monthly Report February 1981
3. Erkohen-E. Monthly Report June 1981.

E. Sykes

ELE/nod/DECEMBER 2 1981

00014409

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : TOBACCO STUDIES

PERIOD COVERED : OCTOBER 28 - NOVEMBER 26 1981

WRITTEN BY : Joseph-L. (LIJ)

TOBACCO LOT ANALYSES

Introduction of Inputs on EDP

Partial analytical results of twenty lots were introduced in the PME Analytical Data List this month.

Lots under Evaluation

Fifty-six lots.

Lots Available, but not yet Analyzed

One hundred and fifty-five lots.

Special Samples

We have received a sample of reconstituted tobacco from the C.S.S.R. Due to very bad machinability of the cut sheet, the cigarettes had to be made by hand. The analyses are under way. [1], [2]

ASSISTANCE TO OTHER PROJECTS

LIBRARY Project

The smoke analyses of all samples have been transmitted to the people concerned.

ZEPLIN Project

The prediction of the tobacco weight and of the smoke deliveries of this blend correspond well with the analytical results of the reference cigarettes.

0000144010

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

		Predicted Values	Analyzed Values	Δ [%]
CO	[mg/cig] :	11.8	11.1	+ 6.3
NO	[mg/cig] :	0.11	0.13	- 15.4
DPM	[mg/cig] :	11.1	10.4	+ 6.7
SN	[mg/cig] :	0.55	0.60	- 8.3
Puff Count	[puff/cig] :	6.0	5.7	+ 5.3

LEAR Project

We have received one sample of a BURLEY strip blend (Control). The analyses are under way.

MISCELLANEOUS

A search for old data on TA, NO_3-N and pesticides in connection with Swiss tobaccos was made for Mr. Corbaz of the Swiss Agronomic Station of Changins. [3], [4]

References

[1] Letter from Lubomirsky-J. to Widmer-A. of October 26 1981
[2] Letter from Lubomirsky-J. to Joseph-L. of November 3 1981
[3] Letter from Corbaz-R. to Boder-J.-B. of September 23 1981
[4] Letter from Joseph-L. to Corbaz-R. of November 3 1981.

LIJ/nod/NOVEMBER 30 1981

0000144011

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : INGREDIENT AND FLAVOUR DEVELOPMENT

PERIOD COVERED : OCTOBER 25 - NOVEMBER 25 1981

WRITTEN BY : Fatton-J.-P. (JPF)

---

368 COSMOS-TANDEM

Objective

Development of a flavour system to be applied on an American type blend in the U.S.S.R.

Summary

The recipes were made and transmitted to the SOPA. Assistance was given to the Primary for the first industrial production of CO-BC-P, CO-BC-H, EPC-4 and EAC-74.

7031 ZEPLIN

Objective

To improve the taste of a 100% expanded tobacco cigarette.

Summary

Flavour EAC-86 was developed at FTR and sprayed on 15 kg of blend.

Follow-up

Modifications will be made following the comments of the smoking panel.

CONTACTS WITH SUPPLIERS (1)

Haarmann & Reimer

On October 28 Messrs. Graefe, Gayko and Scheideler visited us.

00014012

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Product No. 60-600 was submitted; it is a tobacco flavour of natural origin which enhances the tobacco taste without adding a particular note. A sample of this tobacco flavour was submitted some months ago and tested. The taste improvement was not as significant as described by the supplier and some solubility problems remain which prevent us from using it because of the risk of sedimentation and separation.

A sample of tobacco flavour 49800 was submitted for evaluation. This product can be applied directly on the tobacco as an after-cutting solution or incorporated in the filter plasticizer or applied on the aluminium foil.

PFW (represented in Switzerland by Geobell)

Contact was established and some samples of tobacco flavours, essential oils and natural extracts will be dispatched to us.

IFF

Messrs. M. Trevitt and J.-P. Berney visited us on October 29.

- Several samples of "bread crust-like flavours" were submitted.
- The Cocoa flavours 15.96.0264, 15.96.0265, 15.96.0280, 15.96.0480 received in August 1980 have now been approved by the Hunter Committee.
- IFF recently developed a new concept in filter flavouring in co-operation with Filtrona. The flavour is on a thread incorporated in the filter. (Filtrona filter samples are available.)

FIRMENICH

A sample of tobacco improver 03 was received. It should give an improvement in the stems and reconstituted tobacco as it suppresses the harshness of these products.

DRAGOCO

The following three samples of tobacco flavour were received:

DR 4421/1, DR 3491/1, DR 3479.

They have not yet been evaluated.

Reference

1. Fatton-J.-P. to Krasna-B. Report on Visit of Messrs. Graefe, Gayko and Scheideler, Trevitt and Berney, J. Kunzmann - November 30 1981.

JPF/nod/DECEMBER 1 1981

0000144013

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : CIGARETTE AND SMOKE ANALYSIS

PERIOD COVERED : OCTOBER 23 - NOVEMBER 23 1981

WRITTEN BY : Senehi-F (SEF)

TAR AND NICOTINE CONTENTS OF CIGARETTE SMOKE

In the monthly report of September, we indicated the approximate correction factors which can be used to transform ISO-CORESTA tar and SN values to US or German values.

In the meantime, a more complete study has been performed and two regression curves have been established for each country.

a) Transformation of US Tar and SN values into ISO-CORESTA values (1)

These regression curves are of the type

$$y = ax + b$$

x being the tar or SN obtained by PM Richmond (FTC-US)

y being the tar or SN obtained by QA PME (ISO-CORESTA)

For ar and for the same butt length : $y = 1.11 x - 0.5$

For SN and for the same butt length : $y = 1.20 x - 0.10$

These calculations can be made only for cigarettes in the range of

US tar : 8 to 18 mg

US SN : 0.5 to 1.2 mg

For example:

Richmond (FTC-US)		QA PME (ISO-CORESTA)	
Tar (mg/cig)	SN (mg/cig)	Tar (mg/cig)	SN (mg/cig)
10.1	0.80	10.7	0.86

0001144014

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

b) Transformation of QA PME Tar and SN values to German values (2)

These regression curves are of the type

$$y = ax + b$$

x being the tar or SN obtained by QA PME (ISO norms)

y being the tar or SN obtained by PMG Munich (DIN norms)

For tar values higher than 10 mg : $y = 0.93\ x - 0.5$

For SN values higher than 0.7 mg : $y = 0.98\ x - 0.11$

For tar values lower than 10 mg and SN values lower than 0.7 mg, the following factors can be used:

$y = 0.93\ x$ for tar

$y = 0.88\ x$ for SN

For example:

QA PME (ISO-CORESTA)		PMG Munich (DIN)	
Tar (mg/cig)	SN (mg/cig)	Tar (mg/cig)	SN (mg/cig)
15.0	1.00	13.5	0.87
8.0	0.60	7.4	0.53

VISUAL CHECK OF THE FINISHED PRODUCTS' DEFECTS

A study was made to improve the manual of the defects and a proposal was sent to all QC PME affiliates (3).

YIELD OF CARBON MONOXIDE AND NITRIC OXIDE, PUFF BY PUFF

A modification of the program used on our HP 9825 computer now enables us to obtain the CO and NO values in mg and puff by puff (4), should this be necessary.

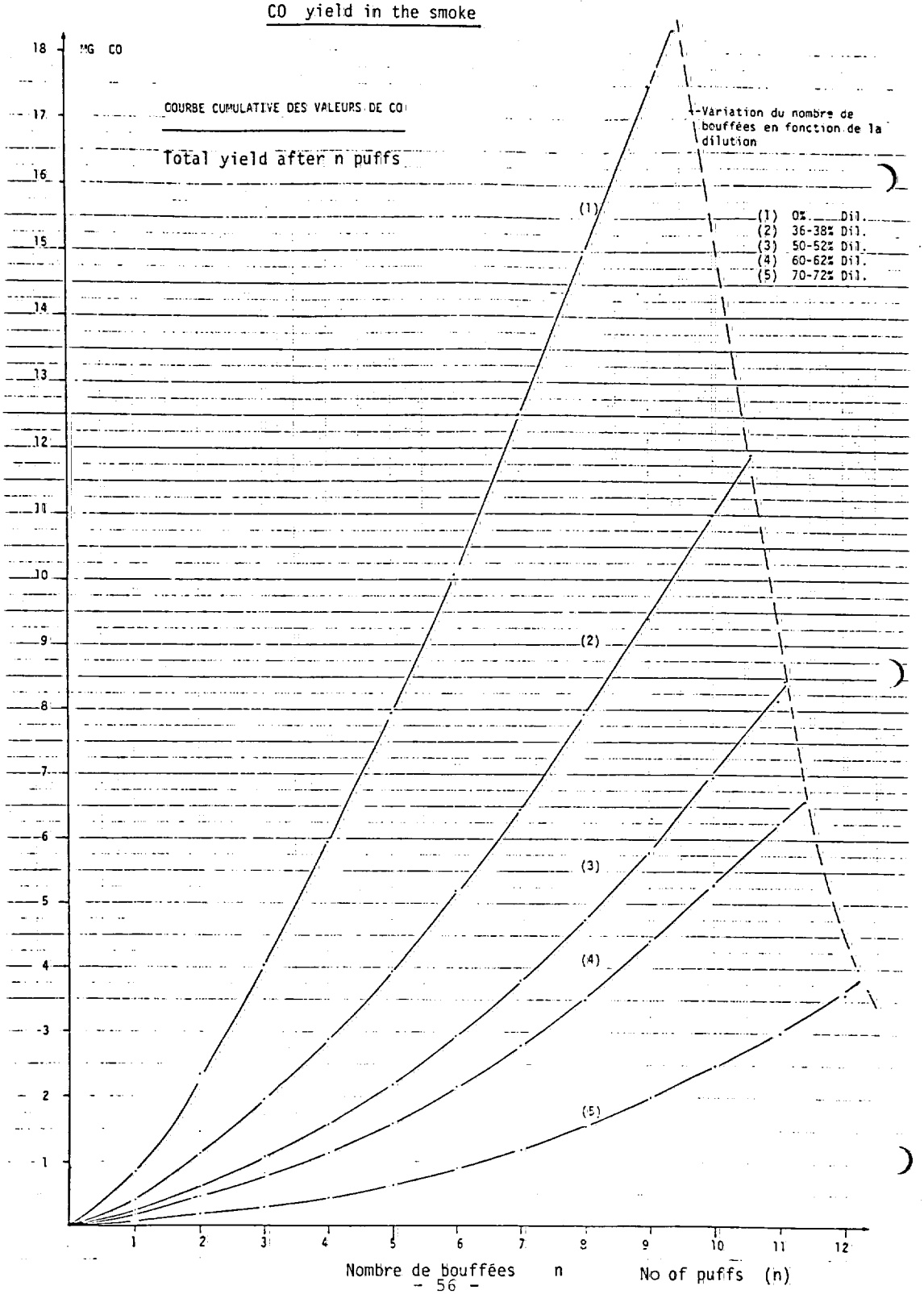
Graphs 1 and 2 show the total yield of CO and NO after n puffs for 5 versions which differ only in the level of dilution.

00014401S

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

GRAPH 1

CO yield in the smoke

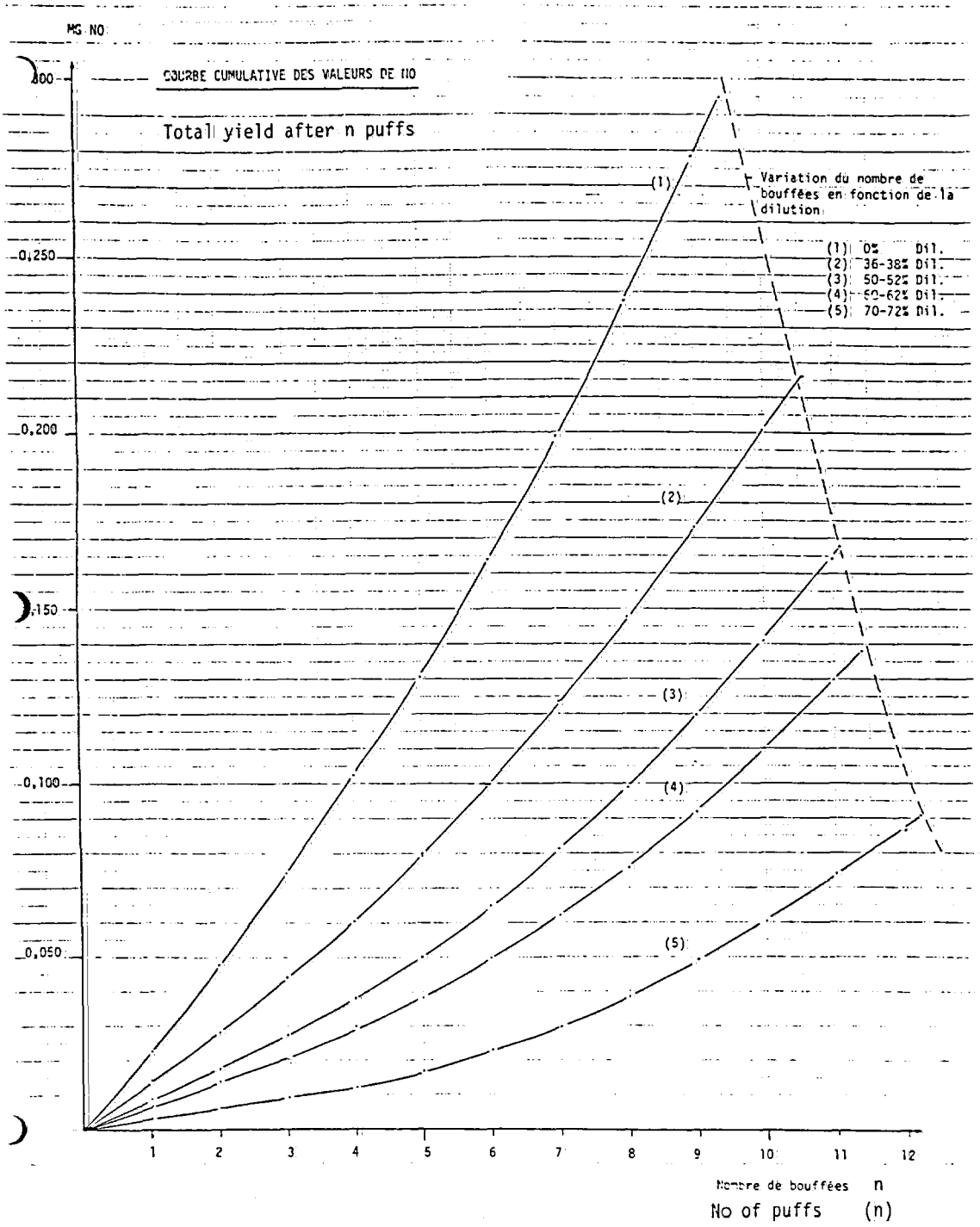


0001144016

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

GRAPH 2

NO yield in the smoke



2000144017

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

CIGARETTE INFORMATION REPORT (CIR)

In order to improve the presentation of the CIR and to make the report easier to use, a questionnaire was sent to all CIR readers. We hope to finish the study by the end of December 1981.

PRODUCT REPORTS

Product reports were written on the following new or modified brands:

Brand	Manufacturer	Country of sale
Corps Diplomatique Luxury Mild 94/F (new brand)	Laurens	Belgium
London 84/F (new brand)	St.Paul's Tobacco	West Germany
Now Ultra Mild 79/F (new brand)	Reynolds (CH)	Norway
Kent Golden Lights (new brand)	Suomen Tupakka	Sweden

REFERENCES

1 Letter from Senehi-F (November 4, 1981)
2 Letter from Senehi-F (November 17, 1981)
3 Letter from Senehi-F (November 6, 1981)
4 Letter from Pittet-M (November 23, 1981)

SEF/edk/DECEMBER 2 1981

2000144018

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : QA ANALYTICAL SERVICES

PERIOD COVERED : OCTOBER 30 - NOVEMBER 24 1981

WRITTEN BY : Widmer-A (ALW)

2.1. CASING KITCHEN

- WESTERN
  Preparation procedures were established for the following solutions (1) : WEF-PC, LMA-AC, BURLEY CASING WEF, BURLEY TOP FLAVOUR WEF.

3.2.1. TRIALS WITH TOBACCO INGREDIENTS

- Citric acid (Supplier: HOFMANN-LA ROCHE, Basle; Producer: CITRIQUE BELGE S.A., Tirlémont (BE)/ yellow sheet 5928, 900 kg) (2)

  Check of a normal production (PMM)

  Laboratory: The sample is within the specifications.
  Subjective evaluation: No significant difference between the standard and the trial was found.

  Concluded on 09/11/81

- Diethylene glycol (Producer and supplier: BASF, Ludwigshafen (Germany))

  The industrial trial on MLK-DB - cigarettes was repeated by PMG Berlin (3).

  Smoke analyses: No significant difference between the standard and the trial was found.
  Subjective evaluation: No significant difference between the standard and the trial was found.

  The trial was accepted.

  This result will be checked on a normal production (4)

- Glycerine (Producer: DOW CHEMICALS, Stade (Germany); Supplier: STOCKVIS, Rotterdam)

  As Stockvis is a new supplier of the Dow Chemicals' glycerine that we use regularly, PMH, Bergen op Zoom, is planning to organize a check on a normal production.

  Laboratory-wise, the sample is within the specifications (5).

0000144019

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

- Honey (Supplier: SCHÜTTE, Bremen; Origin: ACAPULCO, Mexico) (see also 3.2.2.)

  Concerning the supply problems of YUCATAN honey, a trial on MLF-It - cigarettes with the above-mentioned quality was run by PMG-Munich.

  Subjective evaluation: A significant difference between the trial and the standard was found. The use of honey from ACAPULCO was not recommended (6).

  As the source of supply of this quality is not assured, further trials are not planned.

- Honey (Supplier: SCHÜTTE, Bremen; Origin: CHIAPAS, Mexico) (see also 3.2.2.)

  Concerning the supply problems of YUCATAN honey, a trial on MLK-DB - cigarettes was organized by PMG-Berlin.

  Analytical results: The sample corresponds to the specifications.
  Smoke analysis: No significant difference between the trial and the standard was found.
  Subjective evaluation: A significant difference between the trial and the standard was found. The trial was rejected (7).

- Liquorice extract in blocks (A. MENOZZI & R. DE ROSA, Montesilvano (Italy) / yellow sheet 6128, 500 g)

  The sample is within the specifications.

  20 kg were ordered for an industrial trial (16/11/81).

- Liquorice extract in blocks

  The question was raised as to whether liquorice in powder form should be replaced by liquorice in block form for commercial reasons.

  A sample (Producer: FICHERA, Catania (Italy)) was submitted for analytical checking. The sample was, for the most part, within the specifications of liquorice in powder. However, the application of liquorice in blocks would require some important modifications to be be made in the preparation of BURLEY CASING (preparation time, cooking time). Therefore, further trials are not planned (8).

- Liquorice extract in powder (EXTRAITS VEGETAUX ET DERIVES ("EVD"), Marseille / yellow sheet 6124, 1 kg of the quality "TZ")

  The sample is largely out of specifications as regards glycyrrhizic acid content (13.9 %). At the time being, further trials are not planned.

0000144020

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

- Liquorice extract in powder (FERTILIZER & CHEMICALS LTD, Haifa (Israel) / yellow sheet 6164, 3 x 100 g)

  After a first negative industrial trial (9) three new samples ("UD-7", "UH-12", "UF-3") were submitted for analysis.

  In all the samples, the ash-content was found to be slightly too high. The other parameters were within the specifications.

  It was decided to organize an industrial trial with the quality "UD-7". Therefore, 50 kg were ordered (16/11/81)

3.2.2. QUALITY CONTROL OF TOBACCO INGREDIENTS

- Honey (SCHÜTTE, Bremen)

  On a PME-level, different problems were encountered concerning the quality and the origin of the product of the last deliveries.

  Therefore, a meeting between representatives of MPP Lausanne QA and the supplier was organized. We were informed that the crop of YUCATAN-honey is harvested in four periods and sometimes important differences in taste and quality may be seen between them. In order to maintain a regular quality it was decided that the supplier should cover PME needs only with honey from the second crop (February-April). Furthermore, as about 10 % of the drums are regularly analysed by the "HONIGINSTITUT" of Bremen, the results will be sent to Q.A. (10).

  Trials to qualify other origins and suppliers were intensified.

  In addition, QA managers of all PME affiliates were informed that they should apply a re-inforced incoming check on all honey supplies (11).

- Liquorice extract (MAC ANDREWS & FORBES, Camden (USA) / blue sheet 8036) (12)

  The analysis of saccherose in the sample was repeated by the Laboratory of the Customs Offices. Their first value (above 10 % saccharose) was confirmed and therefore their claim was maintained (13). We were informed that the method used was ESCHMANN-POTTERAT.

  This method is based on the FEHLING-reaction. The precipitated copper (I) is dissolved and determined by means of a complexometric titration. The content of saccharose is calculated as being the difference in the sample before and after inversion. The inversion method should not affect either the glycyrrhizic acid or the polysaccharides.

00014402 1

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

Using the ESCHMANN-POTTERAT method, we confirmed the value found by the Customs Offices. In addition, the results found by HPLC were also confirmed. By varying the time of inversion in the ESCHMANN-POTTERAT - method, the content of saccharose was found to be different. This means that the longer the inversion time was, the higher became the saccharose content. Later, it was found that, in spite of the claim of the Customs Offices, polysaccharides were hydrolysed during inversion and determined as saccharose On the basis of these results, an appeal against the decision of the Customs Offices was filed (14).

The appeal was granted after the Customs Laboratories found a saccharose content of 7.2 %, determined by TLC (15).

- Sodium chloride (Supplier: SOCIETE D'AGRICULTURE ET DE VITICULTURE, Cornaux; Producer: RHEINSALINEN AG, Schweizerhalle / yellow sheet 5842, 1000 kg) (16).

  Concentrated yellow spots were observed on the contents of the last 2 sacks of this shipment. They had obviously been caused by an inhomogenous application of the anti-caking agent.

  As the supplier did not agree to take back the two sacks in question, we will find a new supplier of sodium chloride.

3.5.1. TRIALS WITH FILTER GLUES

- Liquid glue for KDF II (filter rod seam)

  - "LESSO 1793 - D2" (LAESSER AG, Erlinsbach/ yellow sheet 6135, 40 kg) (17)

    Machineability: The filter rods were produced at maximum speed. However, some interruptions were caused when rods were not glued because of insufficient heating of the heating blocks.

    Storage: No opening of the rod seam was observed after two months.
    Smoke analysis: No significant difference was observed between the standard and the trial (MLF-CH).
    Subjective evaluation: No significant difference was found between the standard and the trial. The trial was accepted.

    100 kg were ordered for a long-term test. The test will be organized when some technical modifications of the heating blocks have been made.

0001144022

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

- "SICHOPLAST A 7094 V" and "SICHOPLAST A 7094" (Henkel & Cie AG, Pratteln (CH), 2 x 10 kg) (9)

Machineability: The type "SICHOPLAST A 7094" could only be run at reduced machine speed. It was therefore eliminated for further investigation. The type "SICHOPLAST A 7094 V" was applied at maximum machine speed. However, some interruptions were caused due to insufficient heating of the heating blocks.
Storage: No opening of the rod seam was observed after two months.
Smoke analysis: No significant difference was found between the standard and the trial (MLF-CH).
Subjective evaluation: A significant difference between the standard and the trial was found. The trial was rejected.
Further trials will be planned when some technical modifications of the heating blocks have been made.

3.6.1. TRIALS WITH TIPPING GLUES

- "5008 A 33" (WIKOLIN POLYMER) (3)

Two long-term tests with 126 kg and 600 kg were organized in PMG-Munich.

During the second test a slight separation of the glue into a "thick" and a "thin" layer was observed. This led to glueing difficulties due to inhomogenity of the glue.

In a further long-term test the glue will be agitated at regular intervals in order to avoid its separating into two layers.

- "1516 G V 12" (LAESSER AG, Erlinsbach / yellow sheet: 5970, 30 kg; 6054, 100 kg; 6109, 3000 kg)

The purpose of this series of trials was to reduce the pressure on the rollers and consequently to reduce the heating of the glue. The viscosity of the glue was therefore decreased by adding more water to the basic formula (18).

The results obtained were promising, especially on MAX S (19). No significant difference between the trial and the standard was found (MLF-CH) in either the analytical results or the subjective evaluation.

However, at the end of the trials glueing problems were encountered with the porous paper. Therefore, this glue modification will not be introduced for the moment.

0001144023

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

3.8.1. TRIALS WITH PACKING GLUES

- It was planned to speed up a MOLINS HL packing machine in Cousset to 250 HLP/min. Due to different mechanical problems, the machine is not yet functional at this speed. However, a series of trials was organized in view of the higher speed.
  All these trials were run at 225 HLP/min.

  - "LESSO V 3" (LAESSER AG, Erlinsbach / yellow sheet 6110, 500 kg)

    The glueing properties on the machine were satisfactory. However, a tendency to form a film and a layer of foam on the surface was observed.
    A further trial with a slightly modified glue was organized.

  - "LESSO V 3 A" (LAESSER AG, Erlinsbach / yellow sheet 6149, 30 kg)

    The glueing properties on the machine were satisfactory. However, only a slight improvement as regards the problems of the formation of a film and foam was observed. In order to eliminate these problems, a further trial is planned.

  - "ELOTEX 31/00" and "ELOTEX 31/08" (EBNÖTHER AG, Sarnen/ yellow sheet 6166, 2 x 5 kg)

    The type "ELOTEX 31/00" presented glueing problems on the machine and was therefore eliminated.

    The glueing properties of the type "ELOTEX 31/08" were satisfactory. However, the same problems as regards the formation of a film and a layer of foam were observed.

    On the basis of type "31/08" a further trial will be organized.

3.13.1. TRIALS ON PACKING MATERIALS

- Comparison between cellophane and polypropylene as a packing material (20)

  In connection with spotted MPK-cigarettes detected in the Ivory-Coast the question was raised as to whether a difference in protection can be found between packs made of cellophane and packs made of polypropylene.

  MLF-packs, one part packed in cellophane, the other part in polypropylene, were submitted to a constant relative air-moisture (76 % and 92 %) and a constant temperature (20°C). Samples of these packs were taken at regular intervals and the cigarettes were examined to determine the tobacco moisture and to see if spots had formed.

  The conclusions which can be drawn are the following:
  - Neither cellophane packs nor polypropylene packs give an absolute and reliable protection against high air-moisture.
  - Polypropylene packs are more resistant to the influence of moisture than cellophane packs.

0000144024

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

5.1. PRODUCT QUALITY

- Spots on PMS-cigarettes manufactured in PMG Munich (21)

The moisture content of the tobacco of cigarettes without spots was found to be 14.0 %. However, segments of tobacco from cigarettes having spots contained up to 17.6 % moisture. The spots were caused by a too-high local moisture content.

5.2. SPECIAL PROBLEMS

- Water analyses in the heating-plant (22)

Following several problems in the installation, the analyses performed by the Production Department in the heating-plant were checked in the laboratory. No significant differences were found between the results of the laboratory and those of the heating-plant (pH, conductivity, phosphate and sulphite by colometric reactions, hardness, p- and m-value by titration). In some cases instructions and new equipment were given in order to avoid systematic errors and to improve control procedures.

5.3. ASSISTANCE TO OTHER AFFILIATES

- Analyses for the ETNA-plant in PMH, Bergen op Zoom: Humectants in tobacco (33 samples)

REFERENCES

1 Letter from Schwarb-A to the CASING KITCHEN (Nov. 9 1981)
2 Monthly report Widmer-A (December 1980)
3 Monthly report Widmer-A (May 1981)
4 Letter from Widmer-A to Tessendorf-W (November 3 1981)
5 Telex from Widmer-A to Van Duuren-B (November 10 1981)
6 Telex from Guyot-J to Völkl-G (August 17 1981)
7 Letter from Widmer-A to Tessendorf-W (November 3 1981)
8 Letter from Widmer-A to Froidevaux-R (November 23 1981)
9 Monthly report Widmer-A (July 1981)
10 Report of visit from Froidevaux-R (September 30 1981)
11 Letter from Widmer-A (August 31 1981)
12 Monthly report Widmer-A (April 1981)
13 Letter from "Direction du 1er arrondissement des douanes" (June 22 1981)
Letter from Jeannotat-R to Suter-R and Widmer-A (July 1 1981)
14 Letter to "Direction générale des Douanes" (July 21 1981)
Report from Widmer-A (July 22 1981)
15 Letter from "Direction générale des Douanes" (October 26 1981
Letter from Jeannotat-R to Widmer-A (October 27 1981)
16 Monthly report Widmer-A (October 1980)
17 Monthly report Widmer-A (August 1981)
18 Letter from Laesser-H to Widmer-A (May 26 1981)
19 Report from Gast-R (March 1981)
20 Report from Keller-I (November 10 1981)
21 Telex from Schwarb-A to Janke-W (November 2 1981)
22 Letter from Schwarb-A and Keller-I to Amsler-W (October 30 1981)

00014025

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : SPECIFICATIONS

PERIOD COVERED : OCTOBER 25 - NOVEMBER 30 1981

WRITTEN BY : Kopp-A.-M. (AMK)

---

1. FTR-Switzerland

1.1. Some processing, cigarette-making and packing specs have been brought up-to-date.

1.2. The cigarette specs MAE 04/IT and (contract manufacture) MLF 26/FR and MLF 29/IT have been withdrawn.

2. PMH-Holland

2.1. All the specs for the Eindhoven factory have been withdrawn.

2.2. Modification of some processing specs due to the introduction of improved stems in the place of ESTHER and new percentages of ETNA in the blends :

17.7% for blends AR 002, AR 003
20.3% for blend MA 004
13.0% for blend MB 001 ETNA = 4.0% instead of 2.0%
9.4% for blend ML 017
16.7% for blend NP 001

The cigarette specs have been updated accordingly.

2.3. Blend ML 016 has been withdrawn and now a mentholated inner foil is used in Marlboro Menthol MFM 005.

2.4. For standardization reasons, the weights of the cigarettes have been calculated to the standard specific rod weight of :

266.00 mg/ml for MAA, MAK and MPH (basic specific rod weight without any improved stems, ESTHER or ETNA = 276.80 mg/ml)

and

258.00 mg/ml for NLF and NPK.

2.5. Updating of some packing specs for France, mainly due to the introduction of Seita's bundle identification.

2.6. The first complete set of specifications has been issued for Marlboro-UK-AC (project "TENNIS") :

ML 031 with 7.3% ESTHER
MLB 03
MLB 156

The filter is the standard diluted MLBPB-120 already used on MLK, PFF, MIL and NPK.

2000144026

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

2.7. The manufacture of Roy King Size, ROK 01 (Export Standard) has been cancelled.

3. PMG-Germany

Most of the packing specs have been reviewed mainly because of the introduction of Seita's new bundle codification for France, the new health warning and smoke numbers which must be used in Belgium, and due to the new prices of cigarettes sold in Germany.

4. PMB-Belgium

4.1. The cigarette specs of MAC 01 have been modified; this cigarette now has the same tobacco weight as MAC 04/IT.

4.2. Some packing specs have been updated for use in the Christmas bundles.

5. Licensees

5.1. Yugoslavia :

- Some specs for BSK 01 and CEH 01 have been completed.
- The cigarette-making spec CHESTERFIELD FILTER LONG CEH 01 has been finalized.
- The Burley-casing recipe BSK-BB 12.0005 has been modified.

5.2. Laurens Genève :

- 3 complete files of updated specs have been compiled and sent to Area Operations. A complete set of logotype drawings has also been modified.

5.3. Martin Brinkmann-Germany :

- Some provisional specs have been established for CHESTERFIELD KS CEG 02 and SHEFFIELD SHF 01 as a basis for discussion for Area Operations in view of a visit to Germany.

5.4. Laurens Bruxelles and Den Haag :

- Packing specs have been prepared for packs :

CHESTERFIELD INTERNATIONAL	CEI 304)	
CHESTERFIELD KS	CEG 305)	sold in Belgium
CHESTERFIELD REGULAR	CER 304)	

and

CHESTERFIELD INTERNATIONAL	CEI 308)	
CHESTERFIELD KS	CEF 308)	
CHESTERFIELD REGULAR	CER 308)	sold in the Netherlands
LARK FILTER KS	LAK 308)	
L&M FILTER KING	LMK 308)	

These specs were prepared following the introduction of a health warning and smoke number regulations in these countries.

2000144027

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

5.5. Greece :

- The MLK packing specs have been completely reviewed.

6. PME Standard Recipes

6.1. Several modified recipes have been distributed as per their accompanying letters.

6.2. The first issue of the AC recipe for project "TENNIS" MLB cigarettes, manufactured at PMH Holland for the UK, has been established.

6.3. PME codes have been assigned for PC, AC, Burley casing and Burley top flavour recipes for project "COSMOS" (cigarette name "TANDEM" in USSR) and the specs have been distributed.

7. PME Material Specifications

7.1. Sections TA/FA, FM, FP, IK and TP of the "Usage of Materials" file have been updated.

7.2. New submissions of PME material specs to suppliers :

- Tipping paper Korkopor Z 3/30 to Benkert, as used on MLB-UK in Holland.
- "Meerschaum" for the semi-filter FLI as part of the material spec P FM/036 already approved by Baumgartner.

7.3. Some material specs have been approved :

- P FM/044 Filter BSH-80 (Baumgartner)
- P TP/110 Korkopor Z 4/120 used on AIA/Germany (Benkert)
- Hinge lid blanks printed on cardboard Inv. D 240 g (Steiger).

8. Specifications for EDP (AMAPS package from COMSERV)

The buyers in the project group have entered the bill of materials (product structures) for the first pilot products. This is the system which directly concerns specs.

A complete list of the specs not concerning materials is being prepared (processing specs, cigarette and filter weights and sizes etc). The aim is to produce a list which will be complete enough to comply with the requirements foreseen for the near future.

AMK/jud/DECEMBER 2 1981

0001144028

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

PROJECT TITLE : INSTRUMENTATION AND PROCESS AUTOMATION

PERIOD COVERED : 23 OCTOBER - 22 NOVEMBER 1981

WRITTEN BY : Thévoz-M. (MIT)

AUTOMATION OF THE SMOKING LABORATORY (PROJECT COLDAC)

The main peripherals and computers involved in this project were subjected to various reliability tests during this period and the results were positive.

The two lines of the "Data-link" which connect, in the multi-point mode, all the terminals in the laboratories are working successfully, especially regarding immunity to radio-electric interferences. The RTE IV B software, revision 2126, will not be put into operation before the middle of December due to the complexity of its installation. The function of the RTE IV B operating system is to check, in real time, the acquisition of analytical data on the HP 1000 F computer.

At the time of writing the Instrumentation group has already successfully performed a prior revision (2040). This was done for practice. As it is most important that the real time operating system is set up correctly, an engineer from Hewlett-Packard will come to supervise the work at the end of November.

RTD/DIL DATA PROCESSING

The programmes for the daily processing of RTD/DIL data were changed in order to make them more suitable for the users. The direct link-up between the measuring head and the calculator is currently in operation and a test programme has been proposed to the QC laboratory concerning automatic data input. The routine which governs the SODIM instrument checks the RTD values transmitted against the brand specification. When a deviation from the norm of more than 30% is detected, the calculator refuses the measurement and asks the instrument for another one. In this way, drift or sampling errors are avoided. The calculator waits until it has 10 measurements within the ± 30% limit before calculating the average and standard deviation of each sample. These values are then entered into the daily statistics.

0000144029

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

CONSTRUCTION OF MEASURING INSTRUMENTS

Due to the interest expressed by QC PME USA laboratories in our compressibility instrument, we are planning to construct a new series of 10 units for spring 1982.

NITRATE-MONITORING

The transfer of the laboratory installation to the Pilot Plant has now been completed.

A series of modifications was made in the different programmes which control the process.

These changes concern the following points :

- Change of the formats of different graphic and alpha-numerical screens;
- Modification of the list of parameters available to the operator;
- Changes in the reliability checks (upper and lower limits) of the different variables introduced using the keyboard;
- Simplification of the printed reports;
- Introduction of an auto-start programme to set off the system again after power failure.

MIT/jig/NOVEMBER 30, 1981

0001144030

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000

7

0000144031

U.S. DOCLINE
DEC 23 1981

Source: https://www.industrydocuments.ucsf.edu/docs/mfxk0000